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Full contents | Subscribe
Enlarge current cover
Past issues/regional covers

NEWS ANALYSIS
POLITICS THIS WEEK
BUSINESS THIS WEEK
OPINION
Leaders
Letters to the editor
Blogs
Kallery

WORLD
United States
The Americas
Asia
Middle East & Africa
Europe
Britain
International
Country Briefings Go
Cities Guide Go

SURVEYS
BUSINESS
Management Reading
Business Education

FINANCE & ECONOMICS
Economics Focus
Economics A-Z

SCIENCE & TECHNOLOGY
Technology Quarterly

BOOKS & ARTS
Style Guide

PEOPLE
Obituary

MARKETS & DATA
Weekly Indicators
Currencies
Big Mac Index
Chart Gallery

DIVERSIONS
Correspondent's Diary

RESEARCH TOOLS

AUDIO

DELIVERY OPTIONS
E-mail Newsletters
Mobile Edition
RSS Feeds
Screensaver

CLASSIFIED ADS

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Economist Conferences
The World In
Intelligent Life
CFO
Roll Call
European Voice
EuroFinance Conferences
Economist Diaries and Business Gifts

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Print Edition June 2nd 2007

On the cover
How business is starting to tackle climate change, and how governments need to help: leader

The world this week

Politics this week
Business this week
KAL's cartoon

Leaders

The environment
Cleaning up

Freedom of the press in Venezuela
Pulling the plug

The West and Russia
Speak truth to power

Activist investors
Owner drivers

The World Bank
Right, second time

Letters

On Colombia, cities, business schools, Roman numerals, Confucius

By Invitation

Tony Blair
What I've learned

Special Report

Russia and Chechnya
The warlord and the spook

Tatarstan
The survivor

United States

The candidates: John McCain
In search of the old magic

Democrats and health care
Cautious competition

The new surgeon-general
Enter Dr Nice Guy

Natural gas in Wyoming
Boom and doom

The Creation Museum
Keeping the word

Republicans in Texas
Monkey and other business

Lexington
Gore in the balance

The Americas

Venezuela
An opposition gagged

Mexico
Court TV

Brazil
Digging up the dirt

Argentina
Capital sums

Asia

Thailand
The party is over

Malaysia
Lina Joy's despair

Kazakhstan
Black sheep

Australia's aborigines
Original sin

Previous print editions

May 26th 2007
May 19th 2007
May 12th 2007
May 5th 2007
Apr 28th 2007

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Everybody's green now
Trading thin air
Irrational incandescence
Fairfield v the valley
Sunlit uplands
Boom
Dirty king coal
The drive for low emissions
The final cut
Sources
Offer to readers

Business

American corporate governance
Hail, shareholder!

German corporate governance
Shareholders at the gate

BP
Some you win, some you lose

Health care
Storm in a test tube

Luxury goods in India
Maharajahs in the shopping mall

Luxury goods in China
If you've got it, don't flaunt it

Business strategy
Shall we play a game?

The media industry
Place your bets

Face value
Health-care heretic

Special Report

Exoplanets
The planet hunters

Planet formation
When worlds collide

Finance & Economics

Rating agencies
Measuring the measurers

Buttonwood
Who's the patsy?

ABN AMRO
Braveheart two

Hedge funds
Hedge fundraising

Chinese bankruptcy
Euthanasia for companies

China's stockmarket
Sand in the gears

Economics focus
Guests v gatecrashers

Science & Technology

Global warming

Mountains and money
The Iceman cometh not

Dissent in China
The ghosts of purges past

Middle East & Africa

Israel
It could all soon change—but stay miserably the same

Palestinians in Lebanon
A history of the hapless

Iraq
Toe-dipping diplomacy

Somalia
No peace, more terror

Sierra Leone
Justice at last?

Mali
Libraries in the desert

Advertisement

Europe

Italy and the Catholic church
By hook or by crook

Ireland's election
The Teflon taoiseach rides again

Hungarian police
Of cops and spies

Montenegro, one year on
The birthday country

Ukraine's political crisis
A truce, for now?

French politics and the media
Nouveau Grub Street

Charlemagne
In search of an immigration policy

Britain

House prices
Fighting over their castles

Iraq kidnappings
Snatched

Stalking
Boys in blue and men in white coats

Road safety
A spy on every street

The science of education
Experimental subjects

Effective learning
Making minds

Football
Spoils to the victors

Electric cars
Charging around the city

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International

Global warming
Struggling to save the planet

An index of pacifism
Give peace a rating

A stairway to heaven?

Linguistics
Words in code

Conservation policy
Trading down

The Cambrian explosion
Crystal clear

Books & Arts

Is there a God?
To believe or not to believe

Uncertainty
The perils of prediction

Britain since the war
Shopping v politics

Courage
Brown's heroes

The Supreme Court
Their majesties

Max Beckmann
Dutch treat

Obituary

Stanley Miller

Economic and Financial Indicators

Overview

Output, prices and jobs

The Economist commodity-price index

Capital flows to developing countries

Trade, exchange rates, budget balances and interest rates

Markets

Energy productivity

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Africa Rice Center (WA....

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Tenders
Expression of interest for the provision of inspection / Verification services for used moto vehicle.
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Politics this week

May 31st 2007
From The Economist print edition

The White House nominated Robert Zoellick to be the new president of the **World Bank**, replacing Paul Wolfowitz, who is stepping down after a contentious stint in the job. Mr Zoellick was America's chief trade negotiator from 2001 to 2005, when he forged trade pacts with China and Taiwan and championed the Doha round of trade talks. See article

Getty Images

George Bush asked Congress to extend his programme for **tackling AIDS** in 15 mostly African countries, which is due to expire in September 2008. The president wants to spend $30 billion more on the scheme, which will include treatment for 2.5m people.

The party's over

The Constitutional Tribunal in **Thailand** found members of the Thai Rak Thai party guilty of breaking the law during last year's election. The ruling means the party will be disbanded. Its leader, Thaksin Shinawatra, prime minister until deposed in a coup last September, has been barred from politics for five years. The Democrat party, Thailand's oldest, was cleared of charges of fraud. See article

Japan's agriculture minister, Toshikatsu Matsuoka, hanged himself at his parliamentary apartment in Tokyo. His suicide seemed linked to accusations that he had been fiddling his expenses, and was involved in a scandal about rigged bidding for road-building contracts. The next day an executive from a company implicated in the same scandal fell to his death in another apparent suicide.

The former head of **China's** State Food and Drug Administration was sentenced to death for corruption. He was found guilty of taking bribes in return for approving drugs. Chinese standards have been under scrutiny after a number of scandals involving poor-quality or fake drugs and food.

Despite **Malaysia's** constitutional guarantees of religious freedom, its Supreme Court ruled, in an important test case, that Lina Joy, a 43-year-old woman who wants to convert officially from Islam to Christianity, cannot do so without the approval of Islamic *sharia* courts. See article

The authorities in **Kazakhstan** issued an international warrant for the arrest of Rakhat Aliyev, the son-in-law of President Nursultan Nazarbayev who was until last month the country's ambassador to Austria. Mr Aliyev, who has presidential ambitions himself, is accused of involvement in an extortion case that led to the kidnapping of two bankers. See article

Bertie bounces back

AFP

Bertie Ahern's ruling Fianna Fail party did surprisingly well in **Ireland's** election, taking 78 of the 166 parliamentary seats. But its coalition partner, the Progressive Democrats, did badly, so Mr Ahern is expected to form a minority government with the help of independents. To general relief, Sinn Fein fared poorly, falling from five to four seats. See article

Ukraine's warring president and prime minister patched together a deal under which they agreed to a new parliamentary election, to be held in September. But there were signs that the agreement could unravel—and an election is unlikely to resolve the country's political disputes. See article

Andrei Lugovoi, the former **Russian agent** suspected by the British of poisoning Alexander Litvinenko in London last year, said that British security services had tried to recruit him to spy on Russia's president,

Vladimir Putin, and accused them of involvement in Mr Litvinenko's murder.

Russia tested a new intercontinental ballistic missile intended to evade missile-defence systems. Mr Putin criticised American plans to deploy missile defences in central Europe, which he said would make Europe a “powder keg”. He is to visit America in July for talks with George Bush.

The ruling centre-left governments of **Spain** and **Italy** both did badly in local elections.

Dug in

The **Lebanese** army continued to besiege a Palestinian refugee camp on the edge of Tripoli, in the north of the country, where members of Fatah al-Islam, a group proclaiming allegiance to al-Qaeda, refused to surrender. See article

The UN Security Council passed a resolution to set up a special court to try suspects in the killing in 2005 of **Rafik Hariri**, a former prime minister of Lebanon. The Syrian government has been accused of complicity.

In the first round of a primary contest to pick the leader of **Israel's** Labour party, which is part of the ruling coalition, Ehud Barak, a former prime minister, beat Ami Ayalon, a former head of Shin Bet, the domestic intelligence service, by 36% to 31%, knocking out the current leader, Amir Peretz. A run-off is due on June 12th. A general election may be held later in the summer. See article

The **American** and **Iranian** ambassadors to Iraq met in Baghdad to discuss ways of stabilising the country, the first formal meeting between senior American and Iranian officials in 28 years. It was unclear if a higher-level meeting would ensue.

Umaru Yar'Adua was sworn in as president of **Nigeria,** amid scattered protests against the fraudulent election he won in April. Four former state governors accused of corruption are on the run after losing their immunity from prosecution when their terms of office expired.

AFP

America toughened its sanctions against **Sudan** in protest against the government's involvement in killings in the western region of Darfur. But Sudan can still rely on its strong commercial links with countries such as China.

Blank picture

Despite widespread protests in **Venezuela** and expressions of concern abroad, Hugo Chávez's government shut down the main opposition television station, transferring its national channel to a state-backed outfit. The president also threatened the only remaining opposition station. See article

The president of **Brazil's** Senate, Renan Calheiros, denied claims that he had taken bribes from a construction company. The energy minister resigned last month over similar claims. See article

Football's governing body announced a ban on international matches being played in venues higher than 2,500 metres (8,200 feet) above sea level on the grounds it might threaten players' health and distort competition. This produced angry reactions in Bolivia and Ecuador, who risk seeing their footballing comparative advantage eroded.

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Business this week

May 31st 2007
From The Economist print edition

China's ministry of finance tripled a stamp tax on securities transactions to 0.3%, the first time the tax has been raised in ten years, in a determined effort by the government to cool what many see as dangerously overheated stockmarkets. The move caused **Chinese stockmarkets** to record their biggest fall since February's plunge. The Shanghai composite share index, which had risen by more than 40% since then, fell by 6.5%. In contrast to the reaction to February's dive, investors around the world were unfazed; the S&P 500 reached a new record. See article

The enthusiasm for consolidation among global stock exchanges continued as **NASDAQ** agreed to buy **OMX**, which operates exchanges in Sweden, Denmark, Iceland, Finland and the Baltic states, for SKr25.1 billion ($3.7 billion). OMX's share price rose sharply on rumours of a rival bid from the company that owns the Dubai International Financial Exchange.

Clash of the titans

A consortium of banks led by **Royal Bank of Scotland** made a formal offer to buy **ABN AMRO**. RBS valued the proposal at *euro*71.1 billion ($96 billion), which is slightly less than the figure the consortium had been mooting in April, but still *euro*8.6 billion higher, it said, than an offer from **Barclays** that ABN has accepted. The competing bids provide different scenarios for the Dutch bank. The RBS consortium would split ABN in three, whereas Barclays would combine with it to create a global giant. RBS's offer is also contingent on ABN retaining **LaSalle**, its American subsidiary, which **Bank of America** has agreed to buy for $21 billion. See article

Eurotunnel deemed the last round of its restructuring plan a success by revealing that investors had agreed to swap 87% of shares in it for a new company, Groupe Eurotunnel. The operator of the tunnel that links Britain and France has run up £6.2 billion ($12.1 billion) in debt, which its restructuring will cut in half.

In another big property deal, **Archstone-Smith**, a real-estate investment trust with a portfolio of apartments in some of America's most ritzy neighbourhoods, agreed to be bought for $22.2 billion by **Tishman Speyer Properties** and **Lehman Brothers**, an investment bank. Companies that develop properties for rent in sought-after metropolitan locations have been doing well in a weak housing market as tenants defer decisions about buying a home.

A steak in the market

The company that controls **JBS**, Latin America's biggest meat producer, agreed to acquire **Swift**, one of the biggest beef and pork processors in the United States, surprising those analysts who had expected Swift to be bought by one of its American competitors, such as Tyson. The deal gives JBS, which is based in São Paulo, access to America's lucrative export market to Asia, where Japan and South Korea still maintain a ban on Brazilian beef following an outbreak of foot-and-mouth disease in 2005. **CDW**, which supplies computers to government agencies and big companies, said it was being bought by **Madison Dearborn**, a private-equity firm, for $7.3 billion.

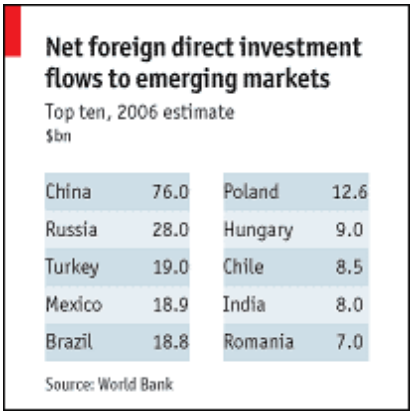
Ford denied reports that it is in talks to sell **Volvo**. The Detroit carmaker, which recorded a $12.7 billion loss last year, is restructuring and recently sold its Aston Martin unit. Ford bought Volvo, based in Sweden, in 1999.

BP announced a $900m gas-exploration deal with **Libya's** national oil company, another sign of warming relations with the country over the past couple of years. With one eye on Libya's energy reserves, American and British companies have been eager to re-invest in fields they sometimes helped to develop. BP left Libya in 1974 after it nationalised its oil industry. See article

The battle to take over **Coles** took a step forward after **Kohlberg Kravis Roberts** ended its lengthy pursuit of Australia's second-biggest retailer and withdrew from a consortium putting together a bid. The favourite is now Wesfarmers, a conglomerate with a stake of nearly 13% in Coles, which is offering to buy the store, with a group of investors, for A$19.7 billion ($16 billion). But Woolworths, which is Australia's biggest retailer (and is unconnected to its American or British namesakes), is said to be considering its options.

Lands of opportunity

The World Bank delivered its annual report on *Global Development Finance* in **emerging markets**. It said that a wave of cross-border mergers and optimism among investors had helped boost FDI flows to developing countries to a record $325 billion in 2006. The bank also calculated that the GDP of the countries included in its study had grown by an average 7.3% last year, though this is expected to slow to what it described as a “more sustainable” 6.1% in 2009.



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KAL's cartoon

May 31st 2007
From The Economist print edition

Kevin Kallaugher

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The environment

Cleaning up

May 31st 2007
From The Economist print edition

Getty Images

How business is starting to tackle climate change, and how governments need to help

THE current row over climate change sounds all too familiar. Germany, host of this year's G8 summit, is trying to get the world to agree on what to do when the Kyoto protocol on curbing greenhouse gases runs out in 2012. America, which dislikes the tough targets that the Europeans want the world to sign up to, is proposing separate negotiations between the world's big emitters. Environmentalists accuse it of trying to sidetrack the issue. The line-up is much like the one that led to America's withdrawal from the Kyoto agreement in 2001.

Yet to conclude from this that nothing has changed would be wrong. Attitudes have shifted sharply over the past six years, most importantly among businesspeople.

Until recently business tended to take a dim view of the idea that the climate was changing. The notion implied that industry had damaged the planet, and should therefore pay for the consequences. Since companies couldn't see the damage they were supposed to have done, they preferred, by and large, to argue that it wasn't happening.

No longer. These days businesspeople are falling over each other to prove their greenness. That's partly because the politics of climate change have moved so fast in America. Five bills in Congress would introduce federal controls. Most of the serious presidential candidates for 2008 favour them. California now has binding targets to cut CO_2 emissions, and other states plan to follow. Many chief executives have come round to the view that federal controls would be better than a patchwork of state laws. And if federal regulations are coming, companies need to support them, in order to be involved in designing them. Hence the need to be seen to be green.

Wind of change

But companies are not driven purely by fear of regulation. Cleaner energy means new technologies, and new money to be made. Businesspeople concerned to position themselves well for a carbon-constrained future must do more than get themselves photographed with Al Gore: they need to invest in technologies that will produce cleaner energy.

There's scope for new investment. In 2003, the most recent year for which figures are available, America's power-generation business, arguably the world's biggest single polluter, spent a rather smaller proportion of its revenues on R&D than did America's pet-food business. But that's beginning to change, as our survey this week makes clear.

Global investment in renewable power-generation, biofuels and low-carbon technologies rose from $28 billion in 2004 to $71 billion in 2006, according to New Energy Finance, a research company. The stock prices of clean-energy companies have been rocketing up. Silicon Valley's venture capitalists are piling into the business, convinced that they can design revolutionary technologies, bring down prices and turf out incumbents in the energy business just as they did in the software business. Oil firms, carmakers, power generators, nervous of being outmanoeuvred, are jacking up their investments in renewables and biofuels.

As the likes of General Electric and BP put money into cleaner technologies, costs will fall. The price of a watt of solar photovoltaic capacity dropped from around $20 in the 1970s to $2.70 in 2004 (though a silicon shortage, caused by rocketing demand as a result of madly generous German subsidies, has pushed it up since). The price of wind power has fallen from $2 per kilowatt hour in the 1970s to 5-8 cents now, compared with 2-4 cents for coal-fired power. More investment will bring prices down further; and, as the gap shrinks, so the costs of switching from dirty energy to the clean sort will fall.

Yet business's new enthusiasm for clean energy is a fragile green shoot in a dark landscape. Much could happen to crush it. A sustained fall in the oil price, for instance, would undermine investment in costlier, cleaner technologies. But the bigger risk is political. Businesses are investing in alternatives to fossil fuels because they assume that carbon emissions will be constrained in the future. If governments do not act to curb emissions, those investments will eventually wither.

A convenient truth

The best way for governments to encourage investment in cleaner energy is to make the polluter pay by putting a price on CO_2 emissions. According to the Intergovernmental Panel on Climate Change, the body set up under the auspices of the United Nations to establish a consensus on global warming, a price of somewhere between $20 and $50 per tonne of CO_2 by 2020-30 should start to stabilise CO_2 concentrations at around 550 parts per million (widely reckoned to be a safeish level) by the end of this century. A $50 price tag would raise petrol prices in America by around 15% and electricity prices by around 35%—hardly draconian when set alongside recent fluctuations. The IPCC reckons that stabilising at 550ppm would knock around 0.1% off global economic growth annually.

A carbon price can be established either through a tax or through a cap-and-trade system, such as the one Europe adopted after signing up to Kyoto. A carbon tax would be preferable, because companies would then be able to build a fixed price into their investment plans; but businesspeople and politicians are both strangely averse to the word “tax”. A cap-and-trade system can be made to work, but the price has to settle at a level that affects commercial decisions. Europe's hasn't: the price has been too volatile, and, for much of its existence, too low, to shift investment patterns much.

Europe has tightened its system up, and the carbon price has risen to a level which could start to make a difference. But Europe, by itself, will not save the planet. It is America that matters, not just because it is the world's biggest polluter, but also because without its participation, the biggest polluters of the future—China and India—will not do anything.

The best news in the fight against climate change is that business is starting to invest in clean energy seriously. But these investments will flourish only if governments are prepared to put a price on carbon. The costs of doing that are not huge. The costs of not doing so might be.

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Freedom of the press in Venezuela

Pulling the plug

May 31st 2007
From The Economist print edition

AP

In silencing an irritating broadcaster, Hugo Chávez has taken a big step away from democracy

Get article background

WHEN a television station closes down, it is not so unusual for its soap stars and journalists to bid tearful on-screen farewells. The remarkable thing about the closure of Radio Caracas Televisión (RCTV) was that it was also marked by protest demonstrations by tens of thousands of Venezuelans. That was not just because RCTV is Venezuela's oldest television company and aired many of its favourite shows. It was also because the protesters judged, rightly, that in pulling the plug on RCTV Hugo Chávez's leftist government has taken another big step away from democracy.

After winning 63% of the vote and another six-year term in a presidential election last December, Mr Chávez announced that RCTV's broadcasting licence would not be renewed when it expired on May 27th. The government's reasons are that the channel acted as an opposition mouthpiece, and that it backed a short-lived coup against Mr Chávez in April 2002. His apologists around the world make the claim that, despite RCTV's closure, Venezuela's media remain free and plural.

It is true that RCTV's news coverage was partisan—as is that of the state-owned channels. It is also true—and reprehensible—that it supported the 2002 coup. But these are dubious grounds for closing it, and are not Mr Chávez's real reason for doing so. After all, when it comes to coups, Mr Chávez has form: as an army officer he led one against a democratic government in 1992. This month he renewed the licence of Venevisión, another private channel whose stance was similar to that of RCTV in 2002 but which now refrains from criticising the government. And if the issue was really that RCTV had broken the terms of its licence, under Venezuelan law that is a matter for the regulator and the courts, not the president. Coincidentally, Mr Chávez has just merged the supposedly independent regulator with the Communications Ministry.

By closing RCTV Mr Chávez has silenced the most powerful source of media opposition to his “21st century socialism”. Only one other television station, a mainly-cable channel that can be seen by only 20% of the population, is critical of the government—and it, too, this week faced threats from Mr Chávez (see article). The remaining channels all belong to the government or to sympathetic businessmen. Some newspapers are more independent, but they increasingly now censor themselves in the face of harassment.

The difference between a mandate and a democracy

Mr Chávez remains personally popular, thanks to the massive increase in Venezuela's oil revenues since

he came to office, money that he has showered on social programmes of varying effectiveness. But polls show that most Venezuelans opposed the closure of RCTV, and are unhappy at the government's failure to tackle crime and food shortages.

The president's electoral mandate is not a blank cheque. Democracy is about much more than just elections—as the left itself has often argued. It is also about political freedoms, the rule of law and checks on executive power. Precious little of this still exists in Venezuela. With television and the press now pretty much under the government's thumb, how will anyone be able to call the next election free and fair?

In the bad old days in Latin America, military dictators simply sent troops to close down obstreperous broadcasters and newspapers. Mr Chávez is more subtle. He has preserved the forms of democracy while gradually, but inexorably, eviscerating it. In a continent that not long ago prided itself on its democratisation, that ought to outrage Venezuela's neighbours. It is high time they plucked up the courage to tell Mr Chávez that he is going in the wrong direction.

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The West and Russia

Speak truth to power

May 31st 2007
From The Economist print edition

Reuters

Changing Russia's behaviour is devilishly difficult. But that is no excuse for not trying

Get article background

DEMONSTRATORS thrashed on the streets of Moscow; the impending mugging of another big energy firm, this one part-owned by BP; cyberwarfare against a small neighbour; the bellicose testing of a new ballistic missile, supposedly able to bypass the American missile-defence system about which the Kremlin fulminates—and all that was only in the past fortnight. When the G8 group of rich countries meets next week in Germany, one of its biggest if unadvertised concerns will be the snarling behaviour of one of its own members, Vladimir Putin's Russia—and the urgent need for a more coherent Western policy towards it.

The behaviour, and the dilemma, stem from Russia's explosive combination of strength and weakness. High oil prices, and the world's largest oil-and-gas reserves, have helped pay off most of Russia's debt. They have also fuelled Mr Putin's increasingly assertive diplomacy, while boosting the living standards of many Russians. In some ways, the seven years of his presidency have been among the least bad periods in Russia's history, which helps to explain his popularity—but so does his neutering of the media, strangulation of political opposition and suborning of parliament and elections. That grip counts as a strength in Mr Putin's book; in fact, the authoritarian system he has built is corrupt and unstable—witness the Kremlin in-fighting and increasingly paranoid repression of dissent ahead of his departure from office next year. The economy, meanwhile, is over-reliant on natural resources and perilously unequal. Add to that a demographic catastrophe and continuing trouble in the north Caucasus (see article), and the picture darkens further.

This new Russia, strident but erratic, requires a subtler approach than either the straightforward rivalry of Soviet times or the handouts and advice (not always very helpful) offered to Boris Yeltsin in the 1990s. The inclination of most Western leaders most of the time has been to coddle or appease Mr Putin, rather than confront him—because they have been deluded about his real goals and motives, or distracted by other crises, or divided by the Kremlin's gas deals.

So it was that at last year's G8 summit, in St Petersburg, Mr Putin openly derided both George Bush and Tony Blair, while precious little was said in public about Russia's obvious abandonment of democracy or its abrasive foreign policy. Compared with that, Britain's decision to press for the extradition of the ex-KGB officer suspected of committing radioactive murder in London last year represents a welcome stiffening of tone. More stern talk at this year's G8, from more leaders, about the Kremlin's threats to Western interests and to those of its own citizens—the expropriation of energy assets harms both—would be better than diplomatic platitudes.

But the truth is that, with the Kremlin in its current mood, even robust tickings-off will not change Russia's trajectory. Censorship will prevent most Russians from hearing them; with their zero-sum attitude to diplomacy, some in the Kremlin interpret criticism as evidence that its policies are biting. Yet the harsher measures that some, especially in America, advocate—such as keeping Russia out of the WTO, or kicking it out of the G8 itself—are more likely to do harm than good. They would feed the widespread belief that the encircling West is bent on weakening Russia (Mr Putin himself avowedly sees complaints about his human-rights record as disguised efforts to impede his pursuit of greatness). They would probably encourage even more draconian measures at home; and they would reduce Russia's incentive to co-operate on difficult issues, such as Kosovo and Iran, where its weight could help.

The Russia beyond

There are other possibilities between cringing platitudes and pyrotechnic rows. The Kremlin needs to be told that it does not have an automatic veto in global diplomacy, even in its old sphere of influence, and even if such a veto is attempted in the United Nations Security Council, as it may be on independence for Kosovo. Neighbouring countries such as Georgia (victim of an unjust trade embargo), Estonia (cyberwar) and especially Ukraine, with a crucial parliamentary vote later this year, must be helped to fend off Russian bullying.

Given Mr Putin's power to select his own successor, the West also needs to concentrate on longer-term measures, such as supporting those independent media and lobby groups that still exist in Russia—even when the Kremlin denounces them as spies. The aim must be to ensure that whatever comes after Putinism is better for Russia, and for the world.

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Activist investors

Owner drivers

May 31st 2007
From The Economist print edition

Peter Schrank

Investors are making life uncomfortable for boards in America. A good thing, on balance

IS THIS, to use the words of Martin Lipton, a veteran Wall Street lawyer, the age of the imperial shareholder? Owners in America are putting executives under an increasingly harsh spotlight. “Activist” hedge funds have found that they can make a lot of money by amassing stakes in companies and pressing managers, sometimes by taking board seats themselves, to make changes that force the share price upwards. More idealistic governance activists want to increase shareholders' say on everything from executive pay to greenery. Even institutional investors, who have preferred discreet discussions with managers to public advocacy, are learning that a muscular approach can pay dividends, literally.

These groups hardly share a common interest. Some wolfish hedge funds are avowedly short-term capitalists; by contrast, idealistic social activists (such as the greens who failed to stop the re-election of an Exxon Mobil director this week) regard lucre as filthy. Stuck in between these two extremes are corporate governance types who worry about issues like pay and share options, though from a long-term point of view. But in combination, the effect of all these groups is loudly to assert the rights of the shareholders of American firms to exercise control over managers (see article).

For some, more power to shareholders is a threat to the system of governance that has served America well for decades. “What corporate America is facing is a revolution, the end-game of which is management-by-referendum,” thunders a partner in Mr Lipton's law firm in the latest issue of *Directors & Boards*. Too much democracy will gum up the system, say opponents, leaving managers and boards unable to take decisions. Talented executives will stay away from boards rather than endure the hassle of endless scrutiny. Shareholders with special interests will abuse their new rights to push their own interests at the expense of shareholders in general.

The company of wolves

Some political activists are undoubtedly dotty; many hedge funds try to couch their self-interest in lofty principles. But corporate boards are guilty of that too. Whatever managers say, hedge funds are good at sniffing out badly run companies and identifying ways they can do better. Studies into the performance of activist funds suggest that the companies they target outperform the market. Their effect is not limited just to those firms they invest in directly: other companies are under pressure to pull their socks up so that they are not next in line.

What about the idea that activist investors might ram through their own interests, to the detriment of other shareholders? Most of the time other investors are riding on the activists' coat-tails: they should be grateful for share-price rises. When the activists' aims do diverge from those of other owners, the best

protection lies in a system that gives the majority a fair shout, rather than in today's cramped shareholder rights.

The answer to tricky investors is more shareholder democracy, not less. That means ending the way brokers automatically vote their shares for managers when shareholders fail to give voting instructions (under review by the New York Stock Exchange). Institutional investors are rightly becoming more vocal in opposing merger transactions that they feel are underpriced: remember T. Rowe Price's objections to the price of Laureate Education, and Fidelity's concerns over the buyout price for Clear Channel Communications. Given a vote, shareholders will not always use it against management: witness Carl Icahn's failure to get on to Motorola's board last month.

Will shareholders micromanage corporate strategy? A few daft ones will try; but most know they lack intimate knowledge of companies' inner workings and their markets. Sensible shareholders want to hold the board of directors to account and it is here that their entitlements should be focused. Companies are already moving to a majority-voting system for director elections; that process should go faster. It should be easier for shareholders to nominate candidates for the board.

More powerful shareholders will mean less powerful managers and boards, of course. That is, after all, the idea. Might a more intrusive regime push listed companies into the welcoming embrace of private equity? Perhaps, although, in private-equity firms, owners are freer to “meddle”, and that is one reason for their success. A more democratic system might even liberate managers, by giving them an unambiguous mandate and recruiting other non-activist shareholders. After all, the best way to get investors to behave like owners is to treat them like owners.

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The World Bank

Right, second time

May 31st 2007
From The Economist print edition

AFP

The White House's new pick to lead the World Bank isn't a bad choice. It should also be its last

TWO years ago George Bush took a shot at naming the president of the World Bank. Many resented him this privilege, which America has jealously guarded even as its contributions to the bank's funds have dwindled. No matter. One of Mr Bush's ablest lieutenants, a veteran of multilateral endeavours, was both eager for the job and respected by the bank's other big backers. The decision was teed up nicely.

But to great surprise Robert Zoellick, Mr Bush's former trade representative, did not get the job, losing out to the controversial Paul Wolfowitz. That shot ended up in deep water last month. But Mr Wolfowitz's resignation—prompted by improprieties that his disaffected staff were in no mood to forgive—has allowed Mr Bush a Mulligan. He took this second, free swing on May 30th—naming Mr Zoellick to the job at last.

The world's poor will hope the position was given in reward for past loyalties, not in expectation of future favours. One test of that: Mr Zoellick should make it clear that his successor be appointed for his abilities, not his nationality. The convention that an American should run the bank while a European runs the International Monetary Fund, is exactly the sort of unmeritocratic horse-trading that both the fund and the bank deplore in developing countries (and Mr Bush deplores at the UN). Both jobs, henceforth, should go to the best people available.

Arranging that sort of fix is meat and drink to Mr Zoellick, who has the rare distinction of having survived almost six years under Mr Bush with his reputation intact. A formidable dealmaker, he had a hand in some of the thorniest negotiations of that period, including restoring the president's trade-negotiating powers, the Doha round of global trade talks and recent attempts to smother the flames in Darfur.

Happily, Mr Zoellick's most pressing task also plays to this strength. He will arrive in the middle of a year-long, roundtable negotiation, in which he must coax and cajole 40 of the bank's donor governments to refill its coffers. His American sponsors would do well to help him by promising to cough up over $300m they still owe from previous funding rounds. Mr Zoellick will have to convince donors that the bank's best work is often its least showy, filling in the gaps left by other aid-givers keen to boast about their own generosity.

Spending the money will place new demands on him. The bank now fights shy of the adversarial negotiations of old, in which it threatened (not very credibly) to deny aid unless governments promised (not very convincingly) to abide by conditions such as cutting tariffs or dismantling state monopolies. The bank now devotes more of its effort to bolstering borrowing governments, rather than wringing concessions from them. It wants governments, in effect, to set themselves conditions that the bank's money and monitoring can help them to meet. It seeks a melding of minds, not a locking of horns.

The trick is to earn a government's trust, without getting too cosy. Mr Wolfowitz felt the bank overstepped that line. He irked shareholders, borrowers and staff alike by interrupting the flow of money to self-dealing governments or tainted projects. His suspensions may have been ad hoc and peremptory, but he was right to think the bank should not judge its success by the sums it moves. Its job is to inspire home-grown efforts to fight poverty. On some occasions, a bit of cash will help. On others, a bit of know-how. But sometimes the bank should also withhold money from a government.

Caddy to the poor

Mr Wolfowitz was preoccupied by grand ends—ousting Saddam Hussein; stamping out corruption. Mr Zoellick is attentive to means: charting a path, however circuitous, to his destination. But on July 1st he will become a president, rather than a president's “man in the room”. To whom should this able lawyer look for his brief? The bank's biggest donors? Its biggest customers? Its staff? None of the above. If Mr Zoellick is to earn his place, he should only ever carry a brief for the poor.

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On Colombia, cities, business schools, Roman numerals, Confucius

May 31st 2007
From The Economist print edition

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Colombia

SIR – I would like to clarify a few of the points made in your article about the murders of trade unionists in Colombia ("Trade, death and drugs", May 19th). I was appointed by President Álvaro Uribe in October 2005 to lead a transformation of DAS, Colombia's civilian intelligence agency, in order to restore credibility to the institution. I have personally overseen a thorough internal investigation to find the alleged list of trade unionists you mentioned. After conducting 104 interrogations of DAS officials and after dozens of polygraph tests, we have found no evidence to support the theory that this list ever existed. It is almost impossible to believe that the creation of such a list would not have left any kind of clues or footprints inside the organisation. The person who claimed there was a list is Rafael García, the former head of information technology at DAS, who made the accusation only after being convicted on illicit enrichment and conspiracy charges and receiving an 18-year prison sentence.

There were inconsistencies and contradictions from the beginning, including the fact that one of the people on the list had been dead since 2001 and that Mr García had apparently "memorised" all the names on the supposed list. The Colombian Prosecutor General's Office, which has a reputation for independence and for assertively prosecuting cases dealing with paramilitaries, has found no merits to call Jorge Noguera, my predecessor, to account for his actions in this particular case and he is not facing criminal charges related to this allegation. By order of President Uribe, the protection of trade unionists, on which DAS will spend $11.5m this year alone, has been a priority and will continue to be during my tenure as director.

Andres Peñate
Director
DAS
Bogotá

Urban bliss

SIR – Your special report on cities overlooked the environmental benefits they provide (May 5th). For instance, cities are more energy efficient to live in than the countryside. I spent seven years living in London, in which I drove an average of 5,714 miles a year mainly visiting family in Norfolk. Last year, to be closer to that family, I moved to a rural village close to Norwich. Since then, I have driven 10,000 miles in just one year. Villages and rural communities lack economies of scale and are incapable of delivering the same network effects as cities. They are inherently inefficient, evidenced by their under-used post offices, bus services, schools, branch railway lines and "cottage" hospitals.

The state should no longer subsidise the private pursuit of Arcadia through expensive public services for remote and sparsely populated areas. Instead, the countryside should be considered a luxury—reserved for wildlife, unmanned agricultural vehicles and electric coaches full of gawking tourists. We should abolish villages and make everyone live in towns of at least 25,000 people.

Huw Sayer
Norwich

SIR – I disagree with your contention that there was an "abject failure" at the state and local level in response to Mumbai's floods in 2005. Although more could have been done to warn us about the storm, the clean-up that followed was astonishing in its speed. Unlike New Orleans, Mumbai was back to normal in less than a week, with power restored and mountains of rubbish cleared away. Good government, when you have it, is independent of economic prosperity.

Shirish Patel
Mumbai

SIR – You listed three cities that have disappeared. But although Tikal and Troy have indeed gone, Tenochtitlán is very much alive and its key religious and government buildings continue to function on the same sites on which they have stood since the city was founded around 1325. It is just that the city's name has been simplified to the easier-to-pronounce identity of the empire that first built it: Mexico City.

Urban Larson
Boston

Doing the business

SIR – Your briefing on business schools perpetuated every myth ever said about them: staidness, impracticality, greediness, cheating and more ("New graduation skills", May 12th). In fact, the one indisputable truth about business schools over the past 100 years has been that a few of the flakier ones are always adopting gimmicky innovations in an attempt to attract attention, innovations which they abandon after a few dismal years. For example, the changes you mentioned at Yale's School of Management mark no less than its third attempt to invent a special identity in just 31 years. Business schools operate on several spectrums, like practical/theoretical, mechanical/human, specialist/generalist, and personal profit/public good. The tensions between these opposites are what keep them dynamic and great.

By the way, you misquoted your concluding source. Stuart Crainer and Des Dearlove did not say that most business students simply get drunk. They said that whereas other students do that, MBA students instead "bond and network", which is surely a good thing.

Carter Daniel
Rutgers Business School
Newark, New Jersey

SIR – The Walnut Walk (which you called the "Wharton Walk") is much more of an occasion than you described. Students do not just visit "ten bars in a single night". The revellers are required to wear suits above the waist and boxer shorts below while being stared at by passers-by. If that does not reduce the arrogance that leads to Enron-sized scandals, then I am not sure the trend towards ethics classes you reported will help.

Edward Nevraumont
Toronto

A study that counts

SIR – Your review of a book on the history of algebra challenged your readers to "try doing multiplication with Roman numerals" ("An equation for eternity", May 12th). I have researched this fascinating topic at length and together with John Makowski, of Loyola University, published an article in the journal *Classical Philology* in 2001. We discussed the use of the abacus and finger reckoning as well as written calculations, and concluded: "Any educated Roman must have been able to do arithmetical problems as well or nearly as well as any educated person today."

David Maher
Senior vice-president
Public Interest Registry
Reston, Virginia

Words of wisdom

SIR – Confucius taught that people should have undivided faith in and obedience to authority, irrespective of the nature of the political establishment. By designating the emperor as the son of heaven mandated to reign over his people, he contributed to the extension and continuation of China's degrading feudal society and regimes. Privileged politicians in power will always want their subjects to acquiesce and conform to their rule. Do the Chinese really want to re-adopt Confucianism in their modern society ("Confucius makes a comeback", May 19th)? I very much doubt it.

Tan Boon Tee
Singapore

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Economist.com
OPINION
BY INVITATION

Tony Blair

What I've learned

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From The Economist print edition

EPA

Tony Blair reflects on the lessons of his decade as Britain's prime minister

Get article background

TEN years ago, if you had told me I would spend a significant part of my premiership on foreign policy, I would have been surprised, a little shocked and probably, politically, somewhat alarmed. Even today, we all run for office concentrating on domestic issues. “Foreign” policy rarely wins votes, and can easily lose them. Yet nowadays the reality is increasingly that we are obliged as leaders to think, work and act internationally.

Over ten years I have watched this grow. (If you had told me a decade ago that I would be tackling terrorism, I would have readily understood, but thought you meant Irish Republican terrorism.) The line between “foreign” and “domestic” policy is being blurred. Climate change is a big issue in developed nations' politics today. It can be beaten only by global action. What happens today in Pakistan matters on the streets of Britain. Mass migration can only partially be managed by individual nations' internal policies. Economies are shaped by forces of globalisation.

On top of this, the world order is changing. The political power of China is emerging as its economic power grows. India will be formidable. Japan is putting its past behind it. Russia is becoming more assertive by the day.

In this age, foreign policy is not an interesting distraction from the hard slog of domestic reform. It is the element that describes a nation's face to the world at large, forms the perceptions of others to it and, in part, its perception of itself.

We all talk of interdependence being the defining characteristic of the modern world. But often we fail to see the fundamental implications of such a statement. It means we have a clear self-interest as a nation in what happens the world over. And because mass media and communication convey powerful images in an instant across the globe, it dictates that struggles are fought as much through propaganda, ideas and values as through conventional means, military or diplomatic.

My reflections, based on this analysis, are these:

1. Be a player not a spectator

Over the past ten years, Britain has been in the thick of it. There is no international debate of importance in which we are not as fully engaged as we can be.

We have attempted to construct the broadest possible agenda that is capable of unifying the international community and is, overtly, values-based. That is why action on poverty in Africa, a good outcome to the world trade talks and agreement on climate change all matter beyond the obvious importance of each individual issue. They are indicative of an attitude, of responsibility to others, an acceptance that international politics should not be simply a game of interests but also of beliefs, things we stand for and fight for.

It is also why we should be prepared to intervene, if necessary militarily, to prevent genocide, oppression, the deep injustice too often inflicted on the vulnerable. Britain, in the past decade, has intervened four times: in Kosovo, Sierra Leone, Afghanistan and Iraq. In each case, regimes of appalling brutality were removed.

AP

Lessons from the Balkans

Earlier this week I visited the people of Sierra Leone, still struggling, but at least able to contemplate a better future. But as important is the next-door state of Liberia, now properly democratic. It might never have been so had Sierra Leone fallen into the hands of the gangsters. Similarly, as a result of Kosovo, the Balkans changed. Countries there can think of a future in the European Union.

So when we come to Darfur, do we really believe that if we do not act to change this situation, the violence will stop at the borders of Sudan? In the early 1990s we could not summon the will to act in Bosnia. It took 250,000 lives lost before we realised we had no option.

It is said that by removing Saddam or the Taliban—regimes that were authoritarian but also kept a form of order—the plight of Iraqis and Afghans has worsened and terrorism has been allowed to grow. This is a seductive but dangerous argument. Work out what it really means. It means that because these reactionary and evil forces will fight hard, through terrorism, to prevent those countries and their people getting on their feet after the dictatorships are removed, we should leave the people under the dictatorship. It means our will to fight for what we believe in is measured by our enemy's will to fight us, but in inverse proportion. That is not a basis on which you ever win anything.

However, the critical point is that we, Britain, should be closely involved in all these issues because in the end they will affect our own future. And the agenda constructed should be about our values—freedom, democracy, responsibility to others, but also justice and fairness.

2. Transatlantic co-operation is still vital

I have real concern that on both sides of the Atlantic there is, in certain quarters, an indifference, even a hostility, to an alliance that is every bit as fundamental to our future as it has been to our past. By this I don't just mean the rampant anti-Americanism on parts of the left. In a sense, that is relatively easy to counter.

It is more a drifting away, occasionally a resurgent isolationism that crosses right and left. In Britain now there are parts of the media and politics that are both Eurosceptic and wanting “an independent foreign

policy" from America. Quite where Britain is supposed to get its alliances from bewilders me. There is talk of Britain having a new strategic relationship with China and India bypassing our traditional European and American links. Get real. Of course we will have our own relationship with both countries. But we are infinitely more influential with them if we have two strong alliances behind us.

In Europe we wonder: is it worth it to continue such reliance on America? We would be better asking whether the political leaders in America still see Europe as their first port of call.

For all our differences, we should be very clear. Europe and America share the same values. We should stick together. That requires a strong transatlantic alliance. It also means a strong, effective and capable EU. A weak Europe is a poor ally. That is why we need closer co-operation between the nations of the EU and effective European institutions. In a world in which China and India will each have a population three times that of the EU, anything else is completely out of date.

3. Be very clear about global terrorism

I fear the world, and especially a large part of Western opinion, has become dangerously misguided about this threat. If there was any mistake made in the aftermath of September 11th, it was not to realise that the roots of this terrorism were deep and pervasive. Removing the Taliban from government seemed relatively easy. Removing their ideology is so much harder. It has been growing for over a generation. It is based on genuine belief, the believers being people determined to outlast us, to be indefatigable when we are weary: to be strong-willed and single-minded when we have so many other things to preoccupy us (and when the comforts of our Western lives seem so untouchable by the activities of what are naturally seen as a few fanatics).

People make much of the fact that in each area of conflict, the extremists take a different shape. They point to the historical absurdity of, for example, Iranian elements linking up to the Taliban. Above all, they say, their weapons, numbers and support are puny compared with ours.

This misses the central point. Revolutionary communism took many forms. It chose unlikely bedfellows. But we still spent decades confronting it.

This new terrorism has an ideology. It is based on an utter perversion of the proper faith of Islam. But it plays to a sense of victimhood and grievance in the Muslim world. Many disagree with its methods. But too many share some of its sentiments. Its world view is completely reactionary. But its understanding of terrorism and its power in an era of globalisation is arrestingly sophisticated and strategic.

It means that it can go into any situation where peace is fragile or conflict possible. It can, by the simple use of terror, break the peace and provoke the conflict. It has worked out that in an age of mass media, instantly relayed round the world, impact counts: and nothing makes more impact than the carnage of the innocent. It has learned that as states respond to terror so they can, unwittingly, feed it.

In the Middle East right now, it stops progress in Iraq. It defies the attempts at peace between Israel and Palestine. It is making Lebanese democracy teeter on the brink. That is significant in itself. But far more significant is the way in which the terrorists have successfully warped our sense of what is happening and why. They have made us blame ourselves.

We can debate and re-debate the rights or wrongs of removing Saddam. But the reality is that if you took al-Qaeda (in Iraq before Saddam's fall) out of the conflict in or around Baghdad, without the car bombs aimed at civilians and the destruction of monuments like the Samarra Shrine, it would be possible to calm the situation. Events in Anbar Province, where slowly but surely Sunni opinion is turning on al-Qaeda, show it. And down in Basra, what is poisoning the city is the violence and criminality of Jaish-al Mahdi and other groups—supported, financed and armed by elements of the Iranian regime. Remove al-Qaeda, remove the malign Iranian activity, and the situation would be changed, even transformed.

The truth is that the conflict in Iraq has mutated into something directly fuelled by the same elements that confront us everywhere. Yet a large, probably the larger, part of Western opinion would prefer us to withdraw. That is the extraordinary dulling of our senses that the terrorism has achieved. In the Palestinian question who gets the blame for lack of progress? The West. In Lebanon—a crisis deliberately provoked by, again, the same forces—who is held responsible? Israel.

In Afghanistan it is clear that the Taliban is receiving support, including arms from, again, elements of the Iranian regime. They have learned from elsewhere. They believe if they inflict enough chaos, enough casualties of Western soldiers, we will lose the will. It will become another “mess”. And if it does, the problem will be laid at the door of the Afghan government and its Western allies.

In the past few weeks alone we have seen terrorist bombs in Morocco, Algeria, Pakistan, India, and arrests in Saudi Arabia. Not a single major European nation is immune. In Africa, Sudan, Somalia, even in places like Nigeria where Muslims and Christians live together, terrorism is active.

There is no alternative to fighting this menace wherever it rears its head. There are no demands that are remotely negotiable. It has to be beaten. Period.

4. We must stand up for our values

We will not succeed simply by military or security means. It is a political challenge. Terrorism recruits adherents on the basis of an appeal to human emotion. It can be countered only by a better, more profound, well-articulated counter-appeal.

AP

Being a player

But this won't happen unless we stand up for our own values, are proud of them and advocate them with conviction. There is nothing more ridiculous than the attempt to portray “democracy” or “freedom” as somehow “Western” concepts which, mistakenly, we try to apply to nations or peoples to whom they are alien. There may well be governments to whom they are alien. But not peoples. Whoever voted to get rid of democracy? Or preferred secret police to freedom of speech?

These values are universal. We should attack the ideology of the extremists with confidence: their reactionary view of the state; their refusal to let people prosper in peace; their utterly regressive views on women. We should condemn not just their barbaric methods of terrorism, but in particular attack their presumed sense of grievance against the West. We need to support and help mobilise moderate and true Islam in doing so. There is nothing more absurd than the idea that removing the Taliban in Afghanistan, or Saddam and his sons in Iraq, and replacing their regimes with the chance to vote, supervised by the UN, is somehow an assault on Muslims. We should point out that those killing Muslims by terror are actually other Muslims and that doing so is completely contrary to the teachings of the Koran.

But, and it is a mighty but, such an approach only counts if it is applied vigorously and in a manner that is even-handed. Here is where I have always felt that the normal politics of left and right are a hindrance. The trouble is that the right is correct on the need to stand firm militarily and in support of freedom; and the left is correct on the need for justice.

The assault on the ideas behind terrorism won't work unless it is seen to be motivated and stirred by a commitment to justice. That is why trying to resolve the Israel-Palestine dispute is so important—not only for its own sake, but because the absence of peace causes suffering that is exploited by this extremism. Ask yourself why parts of the Iranian regime try so hard to prevent a settlement; and then understand why it is crucial to settle it.

We are faced with a challenge derived from a world view. We need our own world view, no less comprehensive but based on the decent values we believe in.

5. It's about tomorrow's agenda too

The importance of such an agenda is that it allows us also to shape the common value system of a world in which, very soon, the new powers and interests will have the strength to influence greatly the path the world takes. So such an approach is a bulwark against extremism but it is also a civilising force in a future in which Western economic and political weight will be less than hitherto. We need a sufficiently strong basis, founded in a clear and even-handed commitment to our values, for the world as it changes to adopt these values, universal as they are, to guide us.

Meanwhile, at home

This article is for a global audience, and has focused mainly on international policy. But there are some interesting lessons from domestic policy also.

1. "Open v closed" is as important today in politics as "left v right". Nations do best when they are prepared to be open to the world. This means open in their economies, eschewing protectionism, welcoming foreign investment, running flexible labour markets. It means also open to the benefit of controlled immigration. For all nations this is a hugely contentious area of policy. But I have no doubt London is stronger and more successful through the encouragement of targeted migration.

Isolationism and protectionism now cut across left and right boundaries. They are easy tunes to play but pointless in anything other than the very short-term.

2. The role of the state is changing. The state today needs to be enabling and based on a partnership with the citizen, one of mutual rights and responsibilities. The implications are profound. Public services need to go through the same revolution—professionally, culturally and in organisation—that the private sector has been through.

The old monolithic provision has to be broken down. The user has to be given real power and preference. The system needs proper incentives and rewards. The purpose should be so that public services can adapt and adjust naturally—self-generating reform—rather than being continually prodded and pushed from the centre. Public-sector unions can't be allowed to determine the shape of public services.

In Britain we have put huge investment into our public services. But we are also opening the health service to private and voluntary-sector partnerships, introducing a payment-by-results system, creating competition and allowing hospitals to become self-governing trusts. The new academies and trust schools will have the freedom to develop as independent but non-fee-paying schools, with outside partners like businesses, universities and charities able to sponsor and run them.

3. Welfare systems work only if there is shared responsibility—the state to provide help, the citizens to use that help to help themselves. The pensions reforms Britain is now putting through will, over the decades, give us a system that is affordable and fair between the generations, by ensuring that, though each citizen is guaranteed a basic pension, they will be expected to top that up with their own finances.

4. Law and order matters in a way that is more profound than most commentary suggests. It used to be that progressives were people who wanted an end to prejudice and discrimination and took the view that, in crime, social causes were paramount. Conservatives thought crime was a matter of individual responsibility and that campaigns against discrimination were so much political correctness.

Today the public distinguishes clearly between personal lifestyle issues, where they are liberal, and crime, where they are definitely not. It is what I call the pro-gay-rights, tough-on-crime position. It confounds traditional left/right views.

5. Social exclusion needs special focus. From 1979 to 1997 the incomes of the richest 20% in Britain grew faster (2.5%) than the incomes of the poorest 20% (0.8%). That has been reversed. Since 1997 the incomes of the poorest have risen faster (2.2%) than the richest (2%). However, this masks a tail of under-achievers, the socially excluded. The rising tide does not lift their ships. This issue of social exclusion is common throughout Western nations.

6. Finally, political parties will have to change radically their modus operandi. Contrary to mythology,

political parties aren't dying; public interest in politics is as intense as it ever was. As the recent turn-out in the French election shows: give people a real contest and they will come out and vote.

But politics is subject to the same forces of change as everything else. It is less tribal; people will be interested in issues, not necessarily ideologies; political organisation if it is rigid is off-putting; and there are myriad new ways of communicating information. Above all, political parties need to go out and seek public participation, not wait for the public to be permitted the privilege of becoming part of the sect.

So, membership should be looser, policymaking broader and more representative, the internet and interactive communication the norm. Open it all up.

Over to you

That is a very short synopsis of what I have learned. I don't presume to call it advice to my successor. I have been reasonably fortunate rarely to receive public “advice” from my predecessors.

The job is difficult enough as it is, and, knowing that, I have nothing but support to offer my successor.

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Economist.com SPECIAL

Russia and Chechnya

The warlord and the spook

May 31st 2007 | GUDERMES
From The Economist print edition

Gamma

Russia's wars in Chechnya, which the Kremlin says are over, have shaped the country that Russians and the world are now living with

Get article background

LIKE a high-end barmitzvah, only with more weapons, the inauguration of Ramzan Kadyrov was held in a giant white marquee, in the grounds of one of his palaces, near the Chechen city of Gudermes. The guests—Russian officers who were once his enemies, rival warlords squirming in dress uniforms, muftis in lambskin hats—brought sycophantic portraits, cars and other gifts fit for a Caucasian potentate. As his pet lions gnawed on their bones outside, Chechnya's new president made a speech, as short and nervous as a schoolboy's, in which he vowed to continue the reconstruction of his wretched semi-autonomous Russian republic.

Everyone applauded—and everyone knew the ceremony was irrelevant. Mr Kadyrov has in effect ruled Chechnya since his father Akhmad, also its president, was blown up in 2004. His authority is based on violence, and the backing of Vladimir Putin, Russia's president. Mr Putin levered Ramzan into his father's post soon after he reached 30, the minimum age for the job.

Superficially, Mr Kadyrov deserves it. Apartment blocks are adorned with cultish posters of Ramzan: with his father; riding a horse; being awarded his Hero of Russia medal by Mr Putin. Behind the posters, many buildings are still pockmarked or gaping with shell holes. But many others have been rebuilt on Mr Kadyrov's watch. “He helps everyone,” says a woman in Grozny, just returned from exile to a refurbished building near Minutka Square, once the site of savage fighting. Another Grozny resident says gratefully that Mr Kadyrov's men repaired all the battle-smashed windows in his neighbourhood.

So the Kremlin has some evidence for its assertion that the two wars fought to quell Chechen separatism—the first rashly launched by Boris Yeltsin in 1994, the second beginning in 1999—are now over. Chechnya is still part of Russia, and any other would-be secessionists have seen the bloody price the Chechens have paid: perhaps 100,000 civilians dead, and many more displaced.

But what kind of Russia is it part of? War with Russia has deformed Chechnya. But perhaps more than anything else in Russia's post-Soviet history, the forgotten Chechen wars have shaped the angry and authoritarian country Russia has become.

Mr Putin made Mr Kadyrov president; but Chechnya helped to make Mr Putin himself president of Russia.

Were it not for the air of emergency engendered by the second Chechen war, which began when Mr Putin was prime minister, the lightening rise of this obscure ex-KGB officer would have met more resistance. The war, and the string of mysterious apartment bombings that preceded it, brought the FSB (the renamed security service that Mr Putin briefly led) back to the centre of Russian politics. And it has been the cause, or the pretext, for many of the hard-line policies of the Putin presidency.

Russia's gathering suspicion towards the West can be traced in part to the autumn of 2004, and Beslan. It was in that town that terrorists demanding Russia withdraw from Chechnya, and a botched rescue attempt, killed over 330 people, most of them children. Mr Putin used the catastrophe as an excuse to change parliamentary rules and scrap elections for regional governors (who are now all, like Mr Kadyrov, appointed by the Kremlin). And he lashed out at foreign powers which, he said, were scheming to weaken Russia.

Whether or not he really believed that knee-jerk explanation, the aftermath of Beslan embittered Mr Putin's relations with the United States and Europe (along with the “orange revolution” in Ukraine soon afterwards, which the Kremlin saw as a Western-backed coup). He had sought to portray Chechnya as another front in the “war on terror”, and was outraged when Western diplomats questioned his post-Beslan political reforms and Russian policy in the north Caucasus. He became ever more concerned to counteract American power; Chechnya also helped to determine one of his methods, namely Russia's renewed courtship of its Soviet-era Arab allies. Dabbling in the Middle East—fraternising with Hamas, prevaricating on Iran—offers a chance to assuage Muslim anger over Chechnya, at the same time as frustrating the Americans.

And the Chechen tragedy helps to explain why Mr Putin's neurotic bluster plays so well among ordinary Russians. Their country may not be a proper democracy, but the Kremlin is still nervously responsive to shifts in the national mood. Partly because of Chechnya, that mood has become increasingly xenophobic.

Perhaps out of an old solidarity, says one Chechen who has lived in St Petersburg and Moscow, Russians were sympathetic to Chechnya's plight during the first war. Few are today, especially since the conflict leapt up to Moscow itself, via multiple terrorist bombings and the theatre siege of 2002, in which 130 hostages died. Alexei Levinson, a sociologist, charitably sees today's antagonism towards Chechens as a displaced form of guilt. Inside, he speculates, Russians know the Chechens have long been wronged, from tsarist colonisation, through Stalin's deportation of the entire Chechen nation in 1944, to the atrocities that untrammelled media coverage of the first war conveyed to the nation. Whatever its cause, the fear and suspicion are fierce, and have fed a widening loathing of foreigners.

No limits

But even as it elevated Russia's spooks, and puffed up their paranoia, Chechnya demonstrated and contributed to the chronic weakening of another once-mighty institution, the army. Before the first war started, Yeltsin's defence minister boasted that Grozny would be taken in two hours. Two years later, with the army exposed as woefully trained and equipped, it ended in humiliating defeat.

When the second one began—now with the Kadyrovs switching sides to fight alongside the Russians—the brutal tactics were more effective. The atrocities were less well publicised, especially after the forcible takeover of NTV, Russia's last independent national television station. Chechnya was thus a factor in the first big skirmish of another of Mr Putin's campaigns, against media freedom. Today, real information about life (and death) in Chechnya comes from human-rights groups and a few brave journalists, of whom there are fewer still after last year's (unsolved) murder of Anna Politkovskaya.

Chechnya, as Russian soldiers put it, became a place “without limits”. Extra pay for combat (real or invented), and the kickbacks required to claim it, were only the most mundane form of graft. There was also kidnapping, the sale of stolen weapons to the enemy and enough oil to kill for. The benighted Chechens were not the only victims of the amorality. Some Russian officers were alleged to have sold their own conscripts to the rebels. Wild abuse of power became normal. Sergei, from Siberia, was shot in the back by a drunken officer in Chechnya in 2003—because, he says, of a row over a woman. Sergei, who now walks with a cane, says serving in Chechnya was like “sticking my head in a refuse pit”.

This depravity and callousness—each year, more Russian soldiers die outside combat than Americans die in Iraq—has helped to generate wholesale dodging of Russia's biannual draft. (Conscripts are no longer supposed to go to Chechnya, but many still do, says Valentina Melnikova, of the Union of Soldiers' Mothers.) Families who can afford to save their sons from service do so by paying corrupt recruitment officers and doctors. One result, as a top air-force officer recently complained, is that those who are drafted are often already sick, malnourished or addicted. Another is the exacerbation of social tensions in what is a perilously unequal country.

As with all wars, the starkest toll of Chechnya's are the dead, who as well as the slaughtered Chechens officially include around 10,000 federal troops, and unofficially many more. Then there are the tens of thousands of injured, such as Dima, who lives with his parents in a grotty apartment on the outskirts of Moscow. In December 1999, Dima was shot in the chest in the village of Alkhan-Yurt. He heard the air rushing out of his lungs; then he was wounded again. He lay bleeding, eating snow, and preparing to die, but lived after a doctor bet his colleagues two bottles of vodka that he could be saved. Two pieces of shrapnel stayed in his back. “I lost my health forever when I was 20,” says Dima, who was incapacitated for two years; terrible years, says his mother. Alkhan-Yurt, meanwhile, became infamous for the

butchery and rape committed there by the Russians soon afterwards.

Still, Dima, now at college, is relatively lucky. Many of the 1m-plus Chechnya veterans came back alcoholic, unemployable and anti-social, suffering what soon became known as “the Chechen syndrome”. This widespread experience of army mistreatment and no-limits warfare has contributed to Russia's extraordinary level of violent crime: the murder rate is 20 times western Europe's. But the cruelty is also reproducing itself in a less well-known and more organised way.

As well as the army, thousands of policemen across Russia have served in Chechnya. Many return with disciplinary and psychological problems, says Tanya Lokshina of Demos, a human-rights group. They also bring back extreme tactics that they proceed to apply at home, such as the sorts of cordons and mass detentions deployed against peaceful protesters in Moscow and St Petersburg in April. Torture, concluded a recent report by Amnesty International, is endemic among Russian police. It is often used to extract confessions, but not always: a survey by Russian researchers found that most victims of police violence thought it had been perpetrated for fun.

Tail wags dog

Is the war truly over, as the Kremlin says it is? Despite the loss of most of their leaders—and somewhat incredibly, considering Chechnya's tiny size—an unknown number of insurgents are still fighting for what they call the Islamic republic of Ichkeria. They are still killing the local forces, under Mr Kadyrov, to whom most of the fighting has been outsourced. But Russians are still dying too.

So are Chechen civilians. Grigory Shvedov, of Caucasian Knot, an independent news service, says the number of “disappearances” has fallen dramatically in the past few years; but they still happen with scandalous frequency. The Council of Europe has repeatedly rebuked Mr Kadyrov and Russia over persistent torture and illegal detention. The decade of trauma, says a Chechen psychologist, has resulted in a spike in suicides, especially of people in their 30s whose lives have been derailed.

In Grozny's Kadyrov Square a young man complains that there is no work outside the government and security services. It is an open secret that Mr Kadyrov's reconstruction push is funded through extorted contributions from those lucky enough to have jobs. The vast sums sent by Moscow for the purpose have largely vanished into thin air.

And instability and violence have skipped across Chechnya's borders to the neighbouring north Caucasus republics, themselves cursed by poverty, ethnic tensions and government that is bad even by Russian standards. The grimmest is Ingushetia, where Husen Mutaliyev was once a used-car salesman and father of a baby girl. Since a spell learning Arabic in Egypt, says his brother Hasan, the police had harassed Husen. Early on March 15th, Hasan says, around 20 masked men seized Husen from his house. “We are Putin's soldiers,” was all they offered by way of identification. They beat him, then shot him when he tried to escape. His body was returned the next day. Around 15,000 Chechen refugees are still living squalidly in Ingushetia, in train wagons, warehouses and goods containers. Some are still afraid; some have nothing left in Chechnya to go back to.

One fear is that the local resentments such treatment provokes could eventually join up into a pan-Caucasian insurgency, intensified by the radical Islam that the wars have helped to foster. The biggest risk, however, may be Mr Kadyrov himself. At 30, he is ruler of what Dmitri Trenin of the Carnegie Moscow Centre describes as a “medieval khanate”, within a country that is still more an empire than a modern state. He has appointed a regional government comprised largely of ex-rebels like himself. If he lives—and for all their theatrical obeisance, some of Chechnya's other strongmen loathe him, as do many Russian officers—what more might he want?

Mr Putin, his partner and patron, is due to leave office in 2008. Mr Kadyrov is already testing the limits of his authority; though Moscow denies it, his men sometimes scuffle with federal troops. One day, it might even suit the Kremlin to encourage this truculence. For now, it needs a stable Chechnya to reassure Russians ahead of next year's presidential election; in the future, it might again need an unstable one.

Like his own political career, the country Mr Putin will bequeath has been formed by its long, coarsening Chechen misadventure. Mr Putin's Russia has become a sort of tamer version of Mr Kadyrov's Chechnya. In both, improvements in living standards have won the approval of populations who have come to expect tragically little from their leaders—a mended window, say, or a pension that is paid on time. But government in both rests on power rather than the law, and has oppressed too many while improving the

lot of most. The big question for Russia, Chechnya and the world is whether the symbiotic reigns of the Chechen warlord and the Russian spook are necessary codas to tumultuous times, or the incubators of yet more instability and pain.

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Tatarstan

The survivor

May 31st 2007 | KAZAN
From The Economist print edition

A better way to skin the Kremlin's cat

WHEN the rulers of the newly independent Russia surveyed their vast, fissiparous territory, there was one uppity Muslim region that worried them especially: not Chechnya, but Tatarstan, an oil-rich semi-autonomous republic on the Volga. Yet whereas Chechnya has been wrecked by war, and umpteen of its leaders have died violently, Tatarstan is still governed by Mintimer Shaimiev, the local boss since 1989.

Part of the difference is geography: Chechnya is on Russia's fraying Caucasian edge, which made it more susceptible to foreign extremism. Part is history. The brutal 19th-century conquest of the Caucasus created an enmity, wrote Tolstoy, “stronger than hatred, for [the Chechens] did not regard those Russian dogs as human beings.” Tatarstan's capital, Kazan, fell to Ivan the Terrible in 1552—a defining moment in Russia's imperial history and imagination. Many Tatars, Russia's second-largest ethnic group, have long seen Russia as their country too. “This is our motherland,” says Gusman Iskhakov, Tatarstan's mufti, “and you cannot choose your motherland.”

Still, in the early 1990s, says Mr Shaimiev, probably without exaggeration, demands for Tatar sovereignty threatened the integrity of the whole Russian federation. But by cannily portraying himself as both a champion of Tatar national feeling and a bulwark against it, Mr Shaimiev peacefully secured most of the attributes of a state (including overseas representation). The Chechens' big mistake, he says, was to declare independence outright: “Russia didn't gather these lands just to give them away.”

Mr Shaimiev's own rule could almost have been a model for Vladimir Putin's. Political competition and critical media have been squeezed. But, corruption notwithstanding, the economy is ticking over, as the construction cranes that rival the minarets in Kazan's skyline attest. With its special talent for blasphemy, the Soviet regime turned many of Kazan's mosques into stables and gyms. Now the mosques have reopened—and gratitude for the local religious revival seems to trump solidarity with Chechnya. “Glory to God that we have Shaimiev!” says the leader of an Islamic women's group. Chechen rebels' dreams of opening a “Volga front” have withered. Mr Shaimiev has become a useful prop in the Kremlin's Arab diplomacy.

Still, like all regional governors, under Mr Putin's centralising reforms he is now subject to the indignity of re-appointment by the Kremlin: a temporary change, needed to establish order, Mr Shaimiev says tactfully, while also insisting that Tatarstan's right to elect its leader has been only suspended. Just as gratingly, a new treaty delineating his republic's powers has been held up in Russia's parliament (the old agreement, signed in the laissez-faire Yeltsin years, has expired). The few remaining nationalists are still hoping for a shock; after all, argues one, nobody predicted the end of the Soviet Union. More likely, after a fudge, Tatarstan and the eternal Mr Shaimiev will carry on much as before.

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The candidates: John McCain

In search of the old magic

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From The Economist print edition

AP

The veteran in the field, John McCain, is finding it hard to get traction

ALL too many presidential candidates look perfect-as-plastic. But John McCain would not be out of place in “Pirates of the Caribbean”, with a fading scar down one side of his face, the result of a skin-cancer operation, and a white-as-dough complexion, the result of post-cancer avoidance of the sun. Mr McCain is the veteran of the new campaign season. He mounted an inspired, and inspiring, insurrection against the Republican dauphin, George Bush, in 2000. And since then he has been one of America's most prominent politicians—so prominent that John Kerry, Mr Bush's Democratic opponent in 2004, wooed him as his running-mate.

McCain 2008 so far lacks the magic of McCain 2000. He is behind Rudy Giuliani in national opinion polls (though the gap between them has narrowed since March), and behind both Mr Giuliani and Mitt Romney in some polls in Iowa, the first state to hold a caucus. He came third to Mr Romney and Mr Giuliani in the first-quarter race for campaign money.

Mr McCain's most notable disadvantage is his age. He will be 72 in January 2009—three years older than Ronald Reagan was when he first moved into the White House—and he would be 80 if he served two terms. It may be true that 70 is the new 60. But Mr McCain has had a hard life. He spent five-and-a-half years in the Hanoi Hilton, a notorious Vietnam prisoner-of-war camp. He broke both arms and a leg when he ejected from his plane, and his hosts left his limbs to set themselves. (He still cannot lift his arms above his shoulders and aides have to comb his hair.) On top of that came a serious bout with skin cancer in 2000. Some 30% of voters and 22% of Republicans express reservations about his age. His opponents say he should be handed a gold watch rather than the keys to the nuclear football.

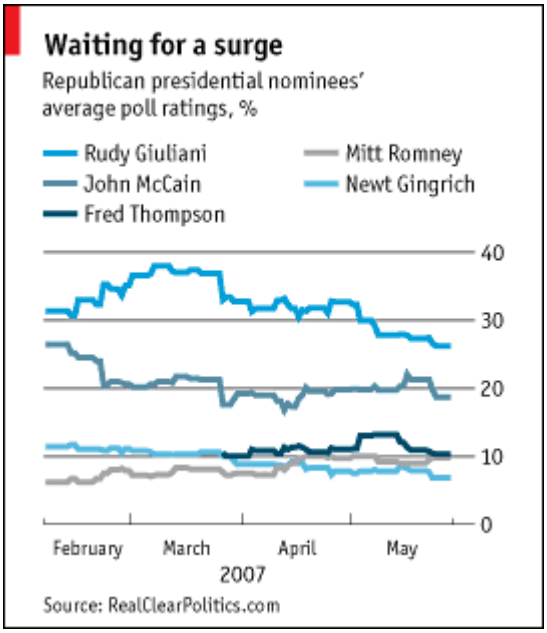
His temperament is also a problem. This is a man who enjoys a fight, but sometimes goes too far. He recently suggested that Mr Romney, a new convert to gun ownership who is ambiguous about immigration, should take a few pot-shots at his Guatemalan gardeners with his varmint gun. Mr McCain also has a hot temper and a mean streak. Last year a survey of congressional staffers by *Washingtonian* magazine ranked his temper the second-hottest in the Senate.

The misadventure in Iraq is another big cross that Mr McCain has to bear. His unflinching support for the most unpopular war in a generation is both limiting his appeal and defining his campaign. The independent McCainiacs of 2000 worry that he is pandering to the Republican base. That base is still suspicious of his romance with independents and the media. Things have been going so badly that Mr McCain has already been forced to revamp his organisation and relaunch his campaign with the less-than-inspiring phrase of “common sense conservatism”.

He has been turning off Democrats, too. Over the past year the share of Democrats who say they would

definitely not vote for Mr McCain has grown by 30 percentage points, according to a *Washington Post*/ABC poll, and the share of independents by 16 points. Mr McCain says he would rather lose an election than lose the war. Defeat in Iraq would be a triple disaster, he argues: it would produce chaos and genocide in the Middle East; it would demoralise America's armed forces (Mr McCain remembers the impact of America's humiliation in Vietnam); and it would encourage Islamic radicals to attack Americans at home. The anti-war Chuck Hagel, once one of his closest friends in the Senate, is probably better placed to win the independent vote if he decides to run.

Mr McCain's last big problem is his long-standing record as a reformer. The only thing that this pugnacious man likes attacking more than Democratic vested interests is Republican vested interests. Mr McCain has used his prominent position, as a perpetual presidential candidate and chairman of three Senate committees, to savage big chunks of the Republican establishment: conservative influence-peddlers such as the televangelists Jerry Falwell and Pat Robertson (whom he has labelled evil); Republican interest-groups such as big defence companies; and a campaign-finance system skewed to benefit incumbents, many of them Republicans.



As chairman of the committee on Indian affairs, Mr McCain was largely responsible for bringing down Jack Abramoff, a conservative super-lobbyist, and badly injuring Tom DeLay, a former Republican leader in the House of Representatives. He seems to take a perverse pleasure in poking his finger in the eyes of errant Republicans. He presented Ted Stevens, a pork-gorging Alaskan senator, with a key chain on which hung a small battery-operated pig's head. “You're still an oinker,” he told his comrade-in-arms.

These attacks on his colleagues have made him a legion of enemies on his own side. Mr McCain is the most conservative of the big three Republicans—pro-life, pro-small-government and pro-projecting American power—but he is also the most loathed among the hard core. Two in five Republicans either distrust him or refuse to vote for him outright. Many Republican power-brokers hate him.

His animosity has also left him vulnerable to charges of hypocrisy. Mr McCain has made much of integrity. But how can he preserve this integrity through a fierce campaign? He has already bowed the knee to Falwell (who died last month), giving the commencement address at Liberty University, the college Falwell founded, and flip-flopped over Mr Bush's tax cuts. He will have little chance of winning the presidency unless he opts out of the system that gives presidential candidates public money in return for spending limits, a system he helped to create.

Anything but boring

Yet Mr McCain brings huge strengths to the campaign. Most people know that he is one of America's great war heroes. His heroism still shines though in his commitment to political reform. He has done more than any other politician to savage vested interests in the name of the national good. And he has done more to form alliances with Democratic senators: on campaign-finance reform (with Russ Feingold), on immigration reform (with Teddy Kennedy), on global warming (with Joe Lieberman). Government watchdogs credit him with saving taxpayers billions of dollars, improving public safety, protecting Indian tribes and stopping illegal influence-peddling. He has never pulled his punches when criticising Mr Bush's performance in Iraq—particularly on the president's see-no-evil approach to incompetence and his see-no-incompetence attitude to his former defence secretary, Donald Rumsfeld.

AP

Looked at in the right light, Mr McCain's weaknesses can also seem like strengths. The flip side of age is experience: Mr McCain probably knows as much about how Washington works as anybody, and certainly as much about what war is like. And the flip side of “temper” is feistiness. Didn't Mr Romney deserve everything he got, given his opportunism over guns and immigration?

Mr McCain is a real person in a world of plastic phoneys. Dinner with

him is the best ticket in Washington: a wild ride of jokes and indiscretions all washed down with vodka rather than the diet soda preferred by most American politicians. (His judgments on the relative merits of John Kerry and Hillary Clinton are particularly worth hearing.) Even Mr McCain's support for the Iraq war has its upside. His views chime with the views of the bulk of Republican activists; and he can truthfully claim to have always criticised the conduct of the war, being one of the first senior figures to call for Mr Rumsfeld's head.

Once and future presidents?

Mr McCain remains a contender in the primaries despite his disappointing start. After all, Ronald Reagan, George Bush senior and Bob Dole each struggled to win the nomination in, respectively, 1980, 1988 and 1996. His chief competitors all have their weaknesses. Mr Giuliani is a social liberal with a colourful history as a businessman cum influence-peddler. Mr Romney is a shape-shifting opportunist—"the flipper rather than the Gipper" (a reference to Reagan), as some conservatives put it; he also has no experience of foreign affairs. Fred Thompson, an actor and former senator who strongly signalled this week that he too would run, is hailed as a saviour by many conservatives, but may turn out to be a lightweight.

And the general election? Mr McCain would be at a double disadvantage going into the campaign—as a champion of an unpopular party and as an advocate of a failed war. But most people share Mr McCain's worries about a precipitous withdrawal from Iraq. And many may also become nervous about handing all three branches of the government to the same party. A dramatic event—either a terrorist attack at home or an al-Qaeda provocation abroad—could well reignite the old magic.

What about a McCain presidency? Mr McCain's critics argue that he would be one of the most belligerent presidents in a generation—picking fights with everybody at home and opening up new fronts on terrorism abroad. He is not a man who knows when to back down. His friends say he is a latter-day Teddy Roosevelt, a man on whom he consciously models himself.

Some of his qualities are less controversially welcomed, at least by reformers. The American political system is clogged up with vested interests that prevent serious change. Mr McCain has shown a rare ability to form cross-party alliances that might explode some of those interests. He grasps the importance of using state power to promote the national interest. It is not clear which version of Mr McCain would emerge. But a McCain presidency would certainly not be boring.

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Democrats and health care

Cautious competition

May 31st 2007 | NEW YORK AND WASHINGTON, DC
From The Economist print edition

The Democratic presidential candidates tout their ideas for reform

AP

Obama listens to the diagnosis

HOW do you devise a health-care plan that is sensible and centrist, yet also stands out from the rest? That is the question faced by all the Democratic candidates for the presidency. Health care is second only to the war in Iraq among voters' concerns, so everyone with an eye on the White House wants a winning answer.

The three front-runners—Hillary Clinton, Barack Obama and John Edwards—have all promised to control costs and provide coverage for the 47m Americans without health insurance. All three have eschewed radical change. Instead, they are jostling over the centre ground: how to tweak America's predominantly private health-care system.

Mr Edwards has long set the pace with an ambitious plan that nods at cost control but concentrates on insuring every American by 2012. Not unlike reforms already under way in Massachusetts and California, Mr Edwards's scheme promises an overhaul of insurance markets, subsidies to help poorer people pay their premiums and a legal requirement that everyone should buy health insurance.

In a sop to the party's left, a government health scheme, such as Medicare, would compete with private insurers. Employers would have to provide their workers with health insurance or pay a tax. But the Edwards plan would still cost the federal government some $120 billion a year, money that would be raised by rolling back Mr Bush's tax cuts for the rich.

In recent days Mrs Clinton and Mr Obama have begun to flesh out their alternatives. Scarred by the disasters of Hillary-care, her failed attempt to overhaul America's health system in 1993, Mrs Clinton is leery of laying out a Big Plan. Her preferred step-by-step approach has started with cost control; ideas for boosting coverage are promised in the coming weeks.

Mrs Clinton offers a litany of well-known, but sensible, savings, such as shifting to electronic records, concentrating more on preventive medicine, improving the management of chronic diseases, and creating a “best practices institute” to set guidelines for optimal care. In all, she claims, $120 billion a year could be wrung out of the health system, money that could be used to pay for broader coverage.

Mr Obama's plan, unveiled on May 29th, borrows from both his rivals'. Like Mrs Clinton, he concentrates on cost control. Mr Obama trots out the same litany of better disease management, electronic records and the like. He promises that the typical American family would save up to $2,500 in medical costs a year. Part of that, however, is gained by shifting expenses to the government. Borrowing an idea touted by John Kerry in 2004, Mr Obama says the federal government should reimburse private insurers for a

share of any catastrophic health costs.

The Obama path to universal coverage is a paler version of Mr Edwards's. It promises insurance-market reform, including the creation of a National Health Insurance Exchange, to act as a clearing-house for people to buy coverage, as well as an industry watchdog. Anyone without health cover at work could also buy into a new public-health plan, much like that for federal employees. Subsidies would help poorer Americans pay their premiums.

Like Mr Edwards's, the Obama plan would levy a tax on firms that do not provide health cover. It would also demand an infusion of federal cash, to be paid for, yes, by rolling back some of the Bush tax cuts for the rich. Mr Obama's aides claim the price tag would be around $65 billion a year, though other health experts think it would be higher.

The big difference is that Mr Obama, unlike Mr Edwards, would not force people to buy health insurance. Only children would have to be covered. That soft-pedalling may please the unions, some of which dislike the idea of compelling workers to buy insurance. But it makes his plan both less efficient and less effective.

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The new surgeon-general

Enter Dr Nice Guy

May 31st 2007 | NEW YORK
From The Economist print edition

A focus on children's health will help Hillary Clinton

CHOOSING a new surgeon-general, America's top medical official, can be a tricky task for a president. Ronald Reagan got in trouble with his conservative base when Everett Koop noisily advocated the use of condoms to prevent the spread of AIDS. Bill Clinton had to sack Joycelyn Elders after comments she made about the merits of masturbation shocked those of delicate sensibility.

So it is probably not surprising that George Bush's new nominee for that post, James Holsinger, is an entirely innocuous choice. Dr Holsinger, a cardiologist from Kentucky, was hailed this week in the media as “one of the nicest guys around”. More to the point, his passion is a topic that everyone can support: improving children's health. According to government calculations, the rate of adolescent obesity has tripled in the country over the past two decades.

As a health official and academic in Kentucky, Dr Holsinger was a force behind the state's pioneering law, passed in 2005, to limit junk food in schools. He also toured the state to educate parents about nutrition and exercise. In announcing his nomination, Mr Bush made special mention of Dr Holsinger's interest in childhood obesity, which he called “a serious epidemic that decreases quality of life and burdens our health-care system.”

It is surely a worthy effort, but the issue may not prove as politically safe as Mr Bush must have hoped. Any ensuing debate on children's health will almost certainly benefit the candidacy of Hillary Clinton. Mrs Clinton has long been a champion of expanding health coverage for children. In March she introduced a bill to renew the financing of the State Children's Health Insurance Programme, a scheme with bipartisan support that is due to expire shortly. And when the country's biggest soft-drinks firms announced last year that they would voluntarily stop selling sugary drinks in public schools, the credit for brokering the deal went to none other than a beaming Bill Clinton.

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Natural gas in Wyoming

Boom and doom

May 31st 2007 | PINEDALE, WYOMING
From The Economist print edition

Gas has brought riches, and trouble, to America's least-populated state

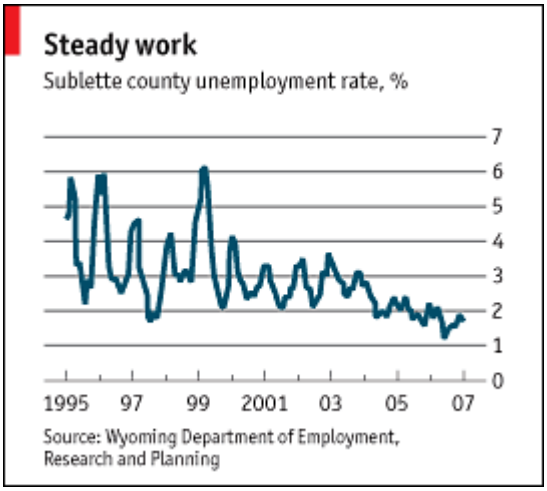
A FEW years ago, Pinedale seemed destined to become a summer retreat for the rich. Impressed by its Wild-West Main Street, and its spectacular position between three mountain ranges, buyers were snapping up second homes in the area. An interior-design store and a micro-brewery opened. Then the drillers and roughnecks arrived and the fate of Pinedale, together with other oil- and gas-rich parts of Wyoming, abruptly changed.

Pinedale is at the centre of a Rocky Mountain gas boom that began in 2000 and accelerated five years later after Hurricane Katrina knocked out Gulf supplies, forcing up prices. On a mesa south of Pinedale, Wyoming's busiest field is laced with dirt roads and pock-marked with well-heads and drilling rigs. Questar, one of several exploring companies, has 199 productive wells, says Kevin Williams, the district manager. It plans to drill about 1,000.

The boom has swelled the population of Sublette county, which grew by 24% between 2000 and 2006, faster than anywhere else in Wyoming. Count the “man camps”—trailer parks where itinerant gas workers collapse, exhausted, at the end of long shifts—and it has increased by about 40% since the boom began, according to Jeffrey Jacquet, an analyst. With barely 7,400 permanent residents, Sublette is still one of the least densely populated counties in America. But it already strikes locals as too crowded. “You don't live in Wyoming because you want to be sociable,” explains Freddie Botur, a rancher.

Government budgets have inflated even more quickly. In 2001 Sublette county raised $16m in sales and other taxes. Last year it took in $53m. Property-tax revenue, all but 3% of which derives from mining companies, went up by 50% between 2005 and 2006. The torrent of money is likely to slow, thanks to a ballot initiative passed last year that will force resource-rich counties to share more of their loot with poorer parts of Wyoming. But plenty will be left over. Next year Pinedale's school district will pay newly qualified teachers a base salary of $43,000—about the same as in Chicago.

Teachers nonetheless earn less than rig hands, most of whom have no more than a high-school education. They are paid at least $49,000 plus overtime, according to a survey last year. The ready availability of well-paid work, albeit hard and dangerous, means that unemployment has almost disappeared (see chart). So have seasonal fluctuations. Jobs used to disappear when the snow fell. But the gas rigs now keep going through the winter.



So tight is the labour market that the economy of western Wyoming is suffering a first-world version of the resource curse. High wages and property values mean it is difficult to start a business in the area, or even to maintain one. Mr Jacquet describes the parts of the economy not directly linked to the gas business as “in paralysis”. Indeed, between 2001 and 2006 the number of retail and entertainment outfits in Sublette county fell even as disposable income soared.

Maggie Palmer, an estate agent, says that houses near the gas field have become much more expensive. But grander properties in prettier, more remote places have hardly increased in value. What really irks

the locals, though, is the boom in crime. The shift pattern favoured by the gas industry (12 hours on, 12 hours off, for two weeks, followed by a fortnight's break) encourages the use of stimulants, including methamphetamine. It also leaves time for drinking and fighting in local bars. Jim Whinnery, the under-sheriff, says that gas workers are responsible for less crime than local rumour would suggest. Yet the number of arrests in Sublette county, which has almost quadrupled since 1995, closely tracks the rise in the number of rigs.

For all the problems it has brought, the most serious threat posed by Wyoming's gas boom is that it will end. The Rocky Mountains are littered with ghost towns that were once thronged with men mining silver, lead or uranium. And if the price of gas falls so far that drilling becomes unaffordable, Pinedale will not just lose the backbone of its economy. It will have lost some of its natural beauty, too.

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The Creation Museum

Keeping the word

May 31st 2007 | PETERSBURG, KENTUCKY
From The Economist print edition

The triumph of faith over experience in Kentucky

EPA

Tribute to a hard week's work

DINOSAURS are monstrously exciting. Alas, museums with dinosaur exhibits tend to indoctrinate visitors with Godless evolutionary theory. So parents who believe that every word in the Bible is literally true have nowhere to take their tots for an uncorrupting fix of *Tyrannosaurus rex*.

Until this week. The Creation Museum opened in Petersburg, Kentucky, on May 28th. Here impressionable youngsters can watch awesome animatronic dinosaurs interacting with primitive humans, just as Genesis implies they did, shortly after the beginning of time one Monday morning in 4004BC.

The museum's aim is to teach visitors how to answer attacks on the Bible's authority in geology, biology and so on, while providing a "family-friendly experience". The founder, Ken Ham, raised $27m from thousands of pious donors to build it. The exhibits are as whizzy as any in a theme park. But starting with scripture and trying to force the facts to fit makes for odd science.

The museum says that, if Noah took two of every animal on his ark, he must have had dinosaurs. Could dinosaurs have fitted into a boat only 300 cubits (about 135m) long? "It is likely that God brought young adults. Being smaller, they would be easier to care for."

The attention to detail is superb. In one exhibit, tiny human figures about to be engulfed by the rising floodwaters are shown throttling each other, to remind visitors why they deserved to drown. The flood killed off most dinosaurs, of course, but the descendants of those Noah saved survived until quite recently, which is why legends of dragons pop up in so many cultures. They were probably hunted to extinction by chaps like St George, says another exhibit.

The debate about the origins of everything is presented even-handedly. Some people trust God, accept that the universe is 6,000 years old and will go to heaven. Others trust human reason, think the Big Bang happened 14 billion years ago and, having abandoned God, are quite likely to start browsing the internet for pornography or commit genocide. Visitors are spared graphic examples of porn, but there are some nasty pictures of lynched black Americans and of Nazi concentration camps.

The museum has humorous touches, too. Fragile displays are labelled "Thou shalt not touch! Please". Unfinished exhibits carry the apology: "This space is still evolving". And, apart from the supercilious ape-descended journalists at the opening, the crowds seem to love it. Ben, from West Virginia, says he is delighted to be able to take his children to a museum that stands up to secularism, even if, at four and two years old, they may be "a bit young to take it all in".

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Republicans in Texas

Monkey and other business

May 31st 2007 | AUSTIN
From The Economist print edition

Fun and games in the legislature's latest session

IN TEXAS the legislature's normal sessions last for just 140 days every other year. What with official business and monkey business, those 20 weeks can be an exciting time. The most recent session, which ended on May 28th, offered its share of amusement. Governor Rick Perry now has to decide whether to sign a bill making the cowboy boot the official shoe of Texas. The real drama of the session, though, was political. Three of the state's top Republicans suffered setbacks.

Start with Mr Perry. An anaemic re-election victory last year—he won with just 39% of the vote—did not subdue him. In February he made headlines all over the country with an executive order calling for all sixth-grade girls to be vaccinated against the human papilloma virus, which causes cervical cancer. Conservative Christians were outraged, and even moderates thought it was going a bit far. The Republican-controlled legislature passed a bill overturning the measure.

Then there is David Dewhurst, who presides over the Senate as lieutenant-governor and is thought to be gunning for Mr Perry's job in 2010. He mishandled a voter-identification measure in May. It was a priority for Republicans, who worry that illegal immigrants are sneaking to the polls. Democrats opposed it, saying it would disfranchise people without driving licences.

Under the rules of the Texas Senate, a bill can be debated only if two-thirds of the members present agree. The Senate has 20 Republicans and 11 Democrats. So Mr Dewhurst looked for a chance to bring the bill up when at least one Democrat was absent. The problem was that the Democrats went to great lengths to be present. Mario Gallegos, who had a liver transplant several months ago, defied doctor's orders to be in the state capital, Austin. He had a hospital bed installed in the office of the sergeant-at-arms. Not only did this make Mr Dewhurst look like a meanie, he also failed to get the bill passed.

Mr Dewhurst's troubles, though, were minor compared with those of Tom Craddick, the speaker of the House of Representatives. Mr Craddick has been speaker since 2003 and has gained a reputation for using power and money to keep House members in line. Representatives who cross him fear finding themselves with bum committee assignments or facing a well-financed challenger at the next election. Until recently most legislators have been afraid to complain. A few weeks ago, however, many became openly mutinous. Anti-Craddick members from both parties called for a new speaker.

On the last Friday night of the session, it seemed that Mr Craddick's opponents were ready to make their move. Word spread around Austin. The House gallery filled with staffers, lobbyists and political enthusiasts. Cornered, Mr Craddick came up with a bizarre interpretation of the rules. As speaker, he said, he could simply ignore any member who wanted to bring a motion to unseat him.

It was unprecedented and unsportsmanlike, but effective. Mr Craddick's opponents were flummoxed. Several legislators made stirring speeches against the undemocratic manoeuvre. Dozens walked off the floor at one point, forcing the House to adjourn for the night. But when the session ended, Mr Craddick was still speaker. Wait for the next session.

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Lexington

Gore in the balance

May 31st 2007
From The Economist print edition

Kevin Kallaugher

Al Gore has more to lose than to gain from running for president

THINGS just keep on getting better for Al Gore. He is not only a global-warming guru—the man who changed the climate of opinion on climate change—he is also an all-purpose political guru as well. He was mocked back in 2000 for accusing George Bush of “risky schemes”. Since then Mr Bush has turned into a Pandora's box of risky schemes. He was ridiculed in America back in 2002 for denouncing the invasion of Iraq. Few would ridicule him today. Europeans only have to look at Mr Gore (and these days there is slightly more of him to look at) to think of what life might have been like without the Toxic Texan. Surely he will soon have a Nobel peace prize to add to his Oscar.

Mr Gore remains a whirlwind of activity. His new book, “The Assault on Reason”, lets the Bush administration have it with both barrels, accusing it of sacrificing evidence to ideology and constitutional restraints to zealotry. But he does not stop there. He worries about America's money-saturated politics. He lambasts television for infantilising the electorate. American democracy, it seems, is as sick as the planet.

Soon he will reappear in his global-warming guise—this time as an impresario of nine simultaneous “Live Earth” pop concerts on seven continents, including Antarctica, on July 7th. These concerts will solidify Mr Gore's reputation among the young for “getting it”. They will also publicise his new organisation, the Alliance for Climate Protection.

All of which raises the question: should Mr Gore revive his political career? Rumours that he is planning to jump into the presidential race are everywhere. It is even said that his friends have established a secret campaign organisation. He has only to refuse a second helping of fried chicken, on the ground that he's watching his weight, and it's assumed he's running.

Mr Gore is well enough known to get into the race late. And a late entry could well carry him all the way to the nomination—exciting the party's left, creating a media frenzy, and making Hillary Clinton and Barack Obama look like old news. “He's going to run,” James Carville, a consultant-turned-pundit, has told *Rolling Stone*, “and he's going to be formidable.”

Formidable or not, Mr Gore should resist such siren voices. He may have been in the business since he was 28. He may have run for president before he was 40. But he is the very opposite of a natural, like Bill Clinton or Mr Obama. He looks horribly out of place in the political bear pit. And he consistently sells himself short as a politician—emphasising expediency over vision even when vision might have been in

his interest, as when he all but ignored global warming in 2000.

Mr Gore lost an unlosable election in 2000 (yes, he won the popular vote, but the election should never have been close). He had eight years of peace and prosperity behind him. His opponent was an inexperienced scamp who could not name the president of Pakistan. But Mr Gore sighed his way through the first debate and painted himself orange in the third. He could easily have solved the Monica problem by promising to be Bill Clinton without the blow jobs; instead he embraced a silly “people against the powerful” populism.

At last, the real Al Gore

Mr Gore's friends say that he has at last discovered his real self—casting off his old inhibitions and letting his passion rip. But surely he is only at ease with himself precisely because he has abandoned politics? And surely the old Gore would re-emerge if he made another bid for the White House? He would inevitably have to talk about more than global warming. And he would have to make a compromise with the campaign-finance system that he now excoriates. How long would it be before he found himself in a Buddhist temple begging for money?

Mr Gore always gave the impression that he was in politics out of duty rather than vocation—his father, a self-made Tennessee senator, dearly wanted his son to be president. But that ambition became a prison for Mr Gore. It forced a natural introvert to spend his time with people and turned a natural didact into a deal-maker. More important, Mr Gore has found his real calling at last: as a public intellectual cum polemicist cum elder statesman. He is not a perfect polemicist. His style is on the stodgy side. His latest book goes over a lot of well-tilled ground about Mr Bush's “faith-based policies”. He sometimes comes across as eccentric—as when he lambasts television for killing public discourse, then celebrates the internet as its potential saviour. A few minutes online, reading the zealots on either the right or the left, should have been enough to explode that illusion.

Nevertheless the whole package is compelling. Mr Gore brings a unique qualification to his writing: the fact that he has operated at the highest level of government. He writes like somebody with something important to say. He packs his argument with facts and illustrations. Above all, he has a genius for getting his message across—button-holing leaders the world over, producing different versions of his book for children and young adults, training more than 1,000 “climate messengers” and generally refusing to let go of the bone. “Those who believe all his garbage are going to be excited to death,” Trent Lott, a senior Republican senator, sneered during Mr Gore's recent appearance before a congressional committee. But a surprising number of Republican backbenchers were quietly excited.

Enoch Powell, a British politician, once remarked that “all political lives end in failure because that is the nature of politics and of human affairs.” In one sense Mr Gore's career ended in spectacular failure—the presidency ripped from his grasp. But in another he won a rare chance at an afterlife. He is the country's conscience on its gas-guzzling ways. He is also the president America never had. Better, surely, to be a presidential might-have-been than just another member of the 2008 freak show.

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Venezuela

An opposition gagged

May 31st 2007 | CARACAS
From The Economist print edition

Reuters

With the closure of RCTV and threats against another television station, Hugo Chávez has left few channels for discontent

Get article background

THEY prayed out loud, they wept and hugged each other. They sang the national anthem and chanted "Freedom!" But there was no stay of execution. Just before midnight on May 27th, Venezuela's Radio Caracas Televisión (RCTV) went off the air after 53 years. A few minutes later, its Channel 2 slot carried the logo of TVes, a new government-run channel with a worthily anodyne schedule of cooking and cultural programmes, interspersed with cartoons and propaganda for the man who shut down RCTV, Venezuela's leftist president, Hugo Chávez.

He announced in December that there would be no more broadcasting for the "fascists" and "coup-plotters" of RCTV. His supporters argue that the channel's licence expired and was simply not renewed. RCTV's owners and staff, along with many independent human-rights organisations, see its closure as revenge for its editorial line. Troops seized its transmitters in fulfilment of a supreme-court order whose legal basis was unclear.

The country's most traditional and popular television station, RCTV attracted around a third of viewers. Gone are Venezuelans' favourite soap operas, the world's longest-running comedy show, and a breakfast talk-show that has earned its outspoken host, Miguel Ángel Rodríguez, a stream of insults and threats from government supporters.

According to opinion polls, an overwhelming majority of Venezuelans oppose what they see as interference with their choice of viewing. In protest, many took to the streets and to such airwaves as are still open to dissenting voices. Students faced tear gas and plastic bullets from riot police for three consecutive days. They were joined by journalists and, in an unusual show of solidarity, by soap-opera stars and news anchors from Venevisión, a rival private channel. Its owner, Gustavo Cisneros, caved in to government pressure in 2004 and removed critical commentary and news items from its broadcasts.

Mr Chávez, who was first elected in 1998, won another six-year term last December. Since then, he has taken a sharp turn to the left, in pursuit of "21st-century socialism". But many of his own supporters disagree with the closure of RCTV. Ismael García, the leader of Podemos, the second-largest party that supports the president, told the National Assembly this week that, "pluralism should not just be a slogan." Podemos boycotted a recent assembly session celebrating the decision, and party sources say its

deputies are unanimously opposed to it.

The closure brought international condemnation, including a bipartisan resolution passed unanimously by the United States Senate. The European Union worried that the non-renewal of the concession took place without an open competition for a successor. This was “disappointing” and “a step backwards”, according to José Manuel Barroso, the European Commission president. Costa Rica's president, Oscar Arias, called it “a mortal blow” to democracy. But other Latin American governments kept quiet. Some rely on Venezuelan aid; others fear Mr Chávez's verbal bombast; most hew to a tradition of non-intervention in their neighbours' affairs. It was left to human-rights and press-freedom groups to make the bluntest criticisms of the closure.

Like Venezuela's other private television channels, RCTV was not without blemish. In April 2002, when Mr Chávez was briefly ousted in a coup attempt, they blacked out news of protests that helped restore him to power. Their role as behind-the-scenes power brokers for the opposition has often distorted their coverage. But the government's growing number of media outlets pump out an unremitting diet of pro-Chávez propaganda, daily belittling and slandering opposition figures.

When Mr Chávez came to power in 1999, the government owned a poorly funded television station called Venezolana de Televisión (VTV), a news agency and a national radio network. That began to change after the events of 2002 showed it to be disadvantaged in media power. Today it controls six television channels (two of which are national) and eight radio stations. It also pays for, and thus controls, almost 200 community radio and television stations, along with countless publications and over 100 websites.

The only remaining opposition television channel is Globovisión, which is largely confined to cable. Two days after pulling the plug on RCTV, Mr Chávez made a barely-veiled threat to close down Globovisión for “clearly and openly inciting” his assassination. “I recommend they ponder very carefully how far they want to go,” the president said. He also threatened the use of force against demonstrators whom he said were being “manipulated” and “used as cannon-fodder”.

Willian Lara, the information minister, said he would prosecute Globovisión's managers for showing footage of the attempt to kill Pope John Paul II in 1981 while playing a song with the lyric, “This does not end here.” The channel said it was “ridiculous” to see this as incitement; the footage was part of a package of highlights from RCTV's history.

A study by observers from the European Union found that VTV's coverage of last December's election was even more slanted towards the president than RCTV's was towards his opponent. State media have a greater obligation to be impartial, since they are paid for by the public, Robert Ménard of Reporters Without Borders, a Paris-based group, argued in Caracas this week. VTV “isn't a public service television station so much as a television station at the service of the president of the republic,” Mr Ménard said. For example, Mr García's refusal to toe the government line has seen him banned from VTV's screens.

In his crackdown on the opposition media, Mr Chávez has taken a tactical risk. But his strategy seems clear. He has said he wants to be re-elected indefinitely. But at the next election in 2012 he may not command as much oil money as he does today. If Venezuelans' discontents mount, they may do so unreported.

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Mexico

Court TV

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A different approach to regulating television

Get article background

JAVIER CORRAL is running late. He has no cash on him, and he needs to get a waiter to charge his mobile phone. A former senator from the ruling centre-right National Action Party (PAN), Mr Corral has no time for such matters because he has become the public face of an unprecedented campaign to open up television and radio to more competition. The campaign scents success.

Last year, months before a presidential election, a law raced through Congress confirming the country's longstanding television duopoly. One broadcaster, Televisa, controls some 70% of the market. Another, TV Azteca, has most of the rest. Together the two take in 95% of television advertising revenue. Generous state funding of elections funnels tens of millions of dollars to the two broadcasters.

The law was approved in “a climate of pressure” from the broadcasters, says Santiago Creel, who now heads the PAN in the Senate. Even so, 47 of the 128 Senators voted against what was promptly dubbed the “Televisa Law”. Led by Mr Corral, the 47 filed a motion of unconstitutionality with the Supreme Court.

The court is now reaching the end of its deliberations. It has struck down clauses dealing with the regulation of broadcasting and with the executive's power to appoint the commissioners of Cofetel, the state telecoms regulator. After the law was promulgated, all four Cofetel commissioners resigned in protest. Two of their replacements are senators who defended the law.

The court may also annul what Mr Corral argues was a giveaway of radio spectrum and a provision that allows broadcasting licenses to be renewed more or less automatically. The way would then be open for Congress to pass a new broadcasting law. Carlos Sotelo, the head of a Senate committee governing radio and television, says that he hopes the court's decision will “give us a floor to start from”.

Time was when Mexico's Supreme Court dutifully rubber-stamped whatever the government and the powers that be desired—as its counterpart in Venezuela now does (see article). Whatever the final outcome of the court's review of the law, it is clear that those times have gone.

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Brazil

Digging up the dirt

May 31st 2007 | SÃO PAULO
From The Economist print edition

A police anti-graft show

Get article background

THE biggest celebrity in Brazil these days is not a football star or a *telenovela* heroine but the federal police force. In a string of spectacular operations with melodramatic names, the police have recently caught judges taking bribes to keep gambling halls in business, congressmen arranging the purchase of ambulances at inflated prices and a retailer smuggling in luxury goods. The latest is “Operation Razor”, an investigation into fraudulent public works that has cost the energy minister his job, implicated a dozen legislators, embarrassed several state governors and now threatens Renan Calheiros, the president of the Senate, an important ally of President Luiz Inácio Lula da Silva.

All this makes Brazil look ever-more corrupt. But it may be simply that the authorities are getting better at detecting the rot. Lula's government lost its corruption-fighting credibility two years ago, when it emerged that his Workers' Party was paying bribes in exchange for votes in Congress. But also on his watch the Federal Police have turned tigerish, often to the government's embarrassment. Operation Razor has implicated nine parties, most of them Lula's allies. The government's audit watchdog, the Controladoria-Geral da União (CGU), has been strengthened. “This government seems to be more corrupt because it uncovered the muck,” Jorge Hage, the CGU's chief, claimed recently.

Operation Razor was a typical Federal-Police production, using tapped telephones and hidden-camera footage to accuse politicians, officials and businessmen of directing public contracts to a builder with a penchant for overcharging and leaving projects unfinished. Rather than deliver electricity to the poor, the firm allegedly left them in the dark; an unfinished bridge shelters an *al fresco* pool hall in the northeastern state of Maranhão.

Such sting operations may be dramatic, but sadly the courts are not matching the police's vigour. No one accused of selling over-priced ambulances or paying stipends to congressmen has been convicted. Scandals trigger a flurry of temporary arrests—more than 4,000 in Federal Police operations since 2003. After that, suspects can count on Brazil's overburdened and inefficient judiciary to keep them out of jail.

The costs of corruption are huge. One study found that in districts with fewer than 450,000 inhabitants—90% of the total—a tenth of the money transferred by the federal government was gobbled up by graft. The latest scandal may slow the government's ambitious infrastructure spending programme, centred on energy projects. The weakening of Mr Calheiros dents the government's influence in the Senate, where its majority is slim. “This is starting to take over the congressional agenda,” says Alexandre Marinis of Mosaico Economia Política, a consultancy.

With Congress lie some of the solutions as well as much of the problem. It is rethinking the practice of allowing congressmen and parties to insert pet projects into the budget, which the executive can then approve as a way to buy legislative support. Some want a reform of politics to make congressmen more accountable to voters and to ban private donations in election campaigns. There are calls for a law to implement the constitutional right to freedom of information.

Even the Federal Police has not emerged unscathed from its own investigations. Two senior officers were asked to step down temporarily this week after allegations that they had interfered in earlier inquiries that threatened their colleagues. Details of Operation Razor were leaked to the press, some via a DVD with the soundtrack of “The Godfather”. Congress is mulling ways to guarantee the secrecy of such investigations. The backlash may dim the Federal Police's star power.

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Argentina

Capital sums

May 31st 2007 | BUENOS AIRES
From The Economist print edition

Reuters

Vote for Macri and you might get to play for Boca Juniors

Would-be mayors and presidential calculations

Get article background

THE office of the mayor of Buenos Aires is “just a hundred steps away” from the Casa Rosada, Argentina's presidential palace, as Fernando de la Rúa, a man who moved from one job to the other, once said. It is a journey that Mauricio Macri, the frontrunner in an election for mayor on June 3rd, hopes eventually to follow. But more is at stake in the vote than Mr Macri's career and who governs Argentina's capital. The mayoral election will provide a pointer to another election this year—that for president, due in October.

The federal capital, as the inner core of Buenos Aires is known, is hardly representative of Argentina as a whole. Its 2.8m inhabitants are richer and less fond of the dominant Peronist party than the rest of the country. The mayor controls the country's third-largest budget, after those of the federal government and the surrounding province of Buenos Aires. But he has fewer powers than provincial governors.

The city, like the country, has bounced back from an economic collapse in 2001-02. But residents worry about crime and public transport. Shops and restaurants in Palermo, a trendy neighbourhood, have been hit by armed robberies. Service on commuter railways has become so abysmal that several hundred passengers rioted at a terminus last month. But unlike in the provinces, in the capital responsibility for policing and transport policy is in federal hands. So the election has become as much a referendum on Argentina's Peronist president, Néstor Kirchner, as on the city's mayor, Jorge Telerman.

Just a few months ago, Mr Kirchner was riding high, thanks to an economy that has grown at over 8% in each of the past four years. Polls still suggest that either he or his wife, Cristina Fernández, would win the presidential election easily. But the government has suddenly started to look accident-prone. Inflation is still around 10%, despite official massaging of the figures. A bribery scandal has forced out three senior officials. Teachers have been protesting over salaries in several places, notably the president's home province of Santa Cruz.

All this has done no harm to Mr Macri, a centre-right congressman. He is from one of Argentina's most powerful business families; he also runs Boca Juniors, the country's most popular football club. He dabbled with a run at the presidency this year before opting to campaign for mayor, a job he stood for unsuccessfully in 2003. This time he has a better chance, though he will almost certainly face a run-off ballot.

Against whom? Much of the mud in the campaign has been slung between Mr Telerman and Daniel Filmus, Mr Kirchner's education minister. Both are on the centre-left. Mr Filmus is one of the president's more presentable ministers. But he is also the target of the teachers' anger. If Mr Filmus fails even to make the run-off, it would be an embarrassing setback for Mr Kirchner, who has campaigned for him.

It would also leave the president with a dilemma. Mr Macri is one of the leaders of what passes for the opposition to Mr Kirchner in Argentina. He doubtless hopes that election as mayor would propel him to the Casa Rosada in 2011. But Mr Telerman is fiercely independent, and Mr Kirchner shows no desire to share the centre-left with others. Porteños, as residents of Buenos Aires are known, are often mocked in the rest of Argentina for believing that the whole country revolves around them. In this year's political cycle, they might retort that it does.

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Thailand

The party is over

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From The Economist print edition

AFP

In two landmark legal rulings, Thailand and (see article) Malaysia take steps away from democracy and freedom

Get article background

THE nine judges of Thailand's Constitutional Tribunal took ten hours to outline in a marathon session, televised live on May 30th, the electoral-fraud cases against the country's two main political parties (and several small ones). They explained in elaborate detail why Thai Rak Thai (TRT), the largest, was being disbanded, whereas its main opponent, the Democrat party, was cleared of all charges. However, the elegance of their legal arguments may be lost on millions of Thais. They gave TRT sweeping election victories in 2001 and 2005 and probably still support the party and its leader, Thaksin Shinawatra. As voters may see it, the country's most popular party has been destroyed by a court set up by the military junta that seized power last year, claiming to be rescuing democracy.

A week before the tribunal's rulings, Thailand's revered King Bhumibol (pictured above) intervened, giving warning that his realm was “close to sinking” and noting that “political parties must exist”. This raised hopes that the tribunal would stop short of dissolving either main party, and punish only individual politicians. Those hopes have been dashed.

In four months of hearings, the tribunal examined allegations of misbehaviour by the accused parties during a snap election Mr Thaksin had called in April last year. The Democrats and other parties boycotted the election, claiming it would be unfair. The courts later found grounds to annul the results, after the king urged them to sort out the “mess”. TRT was accused among other things of bribing small parties to take part in the election, while the Democrats were accused of inducing leaders of smaller parties to make false accusations against TRT.

After the coup, the junta, led by the army chief, General Sonthi Boonyaratglin, replaced the Constitutional Court with a new tribunal, whose judges it selected, and told it to pursue the electoral-fraud cases. The junta also appointed an interim government of old soldiers and bureaucrats; and created a temporary parliament and another unelected body to write a new constitution. The generals also set up investigations into the allegations of corruption and abuse of power by the Thaksin administration, while their interim government sought to borrow some of its policies, such as cheap health care and development funds for rural villages, which had made “Thaksinomics” so popular.

However, although the corruption investigations have unearthed enough evidence to press charges, they failed to find enough of a “smoking gun” to wreck Mr Thaksin's reputation irreparably. Meanwhile, the

interim government has dithered and bungled, dragging down the economy and making Thaksinomics, for all its other flaws, look good. And Mr Thaksin, through a series of stunts such as bidding for Britain's Manchester City football club, has ensured he is not forgotten.

This week's judgment would appear to eliminate TRT and prevent any comeback by Mr Thaksin and his henchmen. But the generals are far from being in the clear. Lesser figures in TRT may regroup and find ways to recapture the party's millions of votes, in the elections the junta promises to hold by the year's end.

That is if things get that far. The junta's constitution-writing body has already backtracked on several undemocratic clauses it tried to slip into the new charter, such as permitting an unelected prime minister and allowing for a “crisis council”, including military chiefs, to step in and solve political conflicts. But other unpopular provisions—such as having the Senate appointed by judges and bureaucrats rather than elected—remain in the draft. So voters, angry at the destruction of the party many support, may reject the proposed charter in the referendum the junta is promising to hold. The mobilisation of police and soldiers ordered by the jumpy generals to head off protests, and their censorship of pro-Thaksin websites and radio stations, may not be enough to prevent rising popular unrest against the regime, despite Mr Thaksin's call on his supporters to accept the verdict.

Local newspapers had quoted one of the nine judges as saying they would “apply the spirit ” of the coup-makers in making their rulings. This, plus the severity of the punishment meted out to Mr Thaksin and his party, and the absolution of the Democrats, will only raise suspicions that the destruction of TRT was a pre-determined outcome. Hopes of a peaceful move back to democracy have dimmed.

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Malaysia

Lina Joy's despair

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From The Economist print edition

A legal blow to religious freedom

Get article background

“EVERY person has the right to profess and practise his religion.” Article 11 of Malaysia's constitution could hardly be more definitive. Yet Lina Joy, who has fought for nine years for the right to convert from Islam to Christianity, was told by the country's Supreme Court on May 30th that the guarantee is worthless to her. The court rejected her demand to have “Islam” removed as the religion stated on her official identity card. It ruled she first needed permission to leave the faith from the country's separate *sharia* courts, which interpret traditional Muslim law. These treat apostates as sinners to be punished, not individuals with a right to their own beliefs.

Miss Joy, now 43, converted to Christianity in her 20s, changing her name from Azlina Jailani. She wants to wed her Christian boyfriend but Malaysia in effect bans Muslims from marrying outside the faith. She went to court after the government department that issues identity cards let her change her name but not her religion. The Supreme Court, like the lower courts, upheld the department's decision. Rather trivialising Miss Joy's struggle, the chief justice said she could not expect to convert from one religion to another on a “whim”. In a development typical of Malaysia's widening religious and racial divide, the only non-Muslim on the three-judge bench dissented from the judgment.

Article 11 has been in the country's constitution since independence from Britain 50 years ago. However, things were muddied by a 1988 amendment, which denied the regular courts all jurisdiction over matters dealt with by the *sharia* courts. It was not clear if this gave *sharia* judges the right to overrule Article 11 for those born Muslim and to tell them they must remain so. It now seems that indeed they can.

The ruling will confirm the fears of many Malaysians—not just among the ethnic Chinese and Indian minorities—that the country is suffering “creeping Islamisation”. As the *sharia* courts and other religious authorities have become more active in recent years, a stream of cases has arisen in which freedoms enjoyed by non-Muslims have been denied to those the religious authorities regard as belonging to the country's majority faith, followed by some 60% of its 27m people, mostly ethnic Malays. Families have been divided because one parent was deemed to be Muslim despite insisting to the contrary. In 2005, the religious authorities snatched the corpse of M. Moorthy, a famous mountaineer whose family insisted he was a Hindu, and gave it a Muslim burial, arguing he had secretly converted to Islam.

Malaysia's prime minister, Abdullah Badawi, has been struggling to promote his own brand of moderate, “civilisational” Islam. But he has opened space for the radicals by clamping down on even temperate debate of religious issues. Last year he shot down a proposed “inter-faith council” and banned a civil-rights group from holding public debates on freedom of worship. Last month he abruptly cancelled a long-planned gathering in Kuala Lumpur of senior Muslim and Christian scholars—including the Archbishop of Canterbury—on the ground that he was too busy to attend it.

In many places, constitutional guarantees of liberty are undermined by laws constraining religious belief. Indonesians, for example, are also obliged to state their religion on their identity cards and to choose between just six officially recognised faiths. The governor of the state of Rajasthan, in India, is being pressed by the state assembly to approve a law punishing conversion from Hinduism. Constraints on individuals' rights to choose their beliefs are usually backed up by claims that religions are somehow “under threat”: a curious lack of faith—in faith itself.

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Kazakhstan

Black sheep

May 31st 2007 | ALMATY
From The Economist print edition

Every family has one. But this one wants to be president

KEEPING it in the family is a way of life in Kazakhstan. Family ties are sacrosanct and, even in the midst of a bitter family feud, kin will ultimately always look out for kin. So Kazakh jaws have dropped at the fall from grace of Rakhat Aliev, the powerful if widely disliked son-in-law of Nursultan Nazarbayev, the president. In late May Mr Nazarbayev sacked Mr Aliev from his post as ambassador to Austria and the Organisation for Security and Co-operation in Europe. A few days later the Kazakh authorities issued an international warrant for his arrest.

To make such a public, international and humiliating fuss, Mr Nazarbayev, it is fair to say, must be extremely displeased with his son-in-law. On May 23rd the Ministry of Interior announced that it had, with the president's backing, started a criminal investigation into Mr Aliev and two others over an alleged extortion case. It involved the kidnapping and beating of two senior bankers, one of whom remains missing. The next day a leading weekly newspaper, *Vremya*, proclaimed in a sarcastic headline the “News of the day: Everyone is equal before the law!”

Mr Aliev, who is married to Dariga Nazarbayeva, the eldest of the president's three daughters, has used the website of a news agency that he owns to deny all the charges. A newspaper and television channel affiliated to him have been closed down temporarily. He claims that his troubles stem from his decision a few months ago to tell his father-in-law of his plans to stand as a candidate for president in 2012, when Mr Nazarbayev's present term ends. This casts an interesting light on last month's quick-fire passage of constitutional amendments by parliament. Officially intended to strengthen parliament and to make the political process in general more democratic, they also allow the authoritarian Mr Nazarbayev to run for the highest office indefinitely. To say the least, this now complicates Mr Aliev's presidential ambitions.

In spite of criticism over corruption and one-family rule, Mr Nazarbayev, 66, in office since 1989, remains highly popular, thanks to the growing prosperity and continued stability of the oil-rich country. Mr Aliev, however, who is 44, is better known for his particular style of doing business. Critics accused him of involvement in several high-profile political scandals, and he became a liability. Mr Aliev managed to antagonise a number of young politicians and businessmen. This led to the creation of a new opposition, with money in its pockets. Hence his first posting to Austria in 2002, far from the Kazakh steppe where he was making such a nuisance of himself.

Yet until now Mr Aliev has always bounced back into favour with his father-in-law. He is family, after all. Upon his return from Vienna, he was made deputy foreign minister. Then, in early February, when the kidnapping of the bankers, one of whom is a close relative of the mayor of Almaty, became public knowledge, he was swiftly dispatched to Austria again. His future may now depend in part on whether his wife, a prominent member of parliament and also a possible presidential contender, will stand by him. She has in the past. But divided family loyalties are now pulling her—and Kazakhstan—in unforeseeable directions.

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Australia's aborigines

Original sin

May 31st 2007 | YIRRKALA
From The Economist print edition

Still disadvantaged, 40 years on

LAKLAK BURARRWANGA (or Barbara as she introduces herself) well recalls her school days in the 1960s at Yirrkala, a remote settlement in Arnhem Land in Australia's Northern Territory. Teachers would give her soap to wash out her mouth if she spoke her native aboriginal language instead of English. Aborigines then were expected to “assimilate” into mainstream Australia, a since discredited policy that virtually condemned them as a doomed race. Yet as Australia marks the 40th anniversary of a constitutional referendum to end discrimination against them, John Howard, the prime minister, proposed on May 24th that aborigines be required to learn English, to be “absorbed into our mainstream”. Barbara speaks both languages fluently. But she wonders how much official attitudes to her people have really changed, these 40 years.

In the referendum in May 1967, Australians amended their constitution to allow the federal government (rather than, as previously, the states) to make laws for indigenous Australians, and to include them for the first time in the national census. It passed by a landslide: 90% in favour. Yet the 500,000 aborigines, who comprise about 2.5% of Australia's population, still suffer chronic disadvantages in jobs, schooling and health. Their life expectancy trails Australians' as a whole by 18 years. This seems all the more deplorable at a time when the rest of Australia is basking in its longest boom in memory.

Having served longer than any other prime minister since the referendum (11 years), Mr Howard has had the best chance to make a difference. He has fluffed it. He has rejected calls to make a symbolic national apology for past injustices. And he has argued that the best hope for aborigines to share in Australia's “bounty and good fortune” lies in helping them join mainstream society through market-based reforms such as enabling them to buy their own houses on community-owned land.

Helen Hughes of the Centre for Independent Studies, a conservative Sydney think-tank, reflects the prime minister's views in a recent book. She pronounces community settlements in remote “homelands” such as Arnhem Land a failure; they involve, she says, a “reverse racism” by segregating their inhabitants from the benefits of the mainstream economy.

But some of these communities are flourishing as centres of aboriginal art. And only a minority of aborigines has chosen to live in the homelands, where their forebears lived for 60,000 years before Europeans arrived in 1788. Far more have already chosen to try to prosper in the market economy. Some are even succeeding. Andrew Bishop, who flew the aircraft bringing indigenous leaders from Sydney to Canberra to mark the referendum's anniversary, is one of Australia's first indigenous pilots; Qantas Airways, his employer, is among several big companies with successful indigenous employment quotas. Aboriginal art has supplanted the kangaroo and the Sydney Opera House as the country's most popular symbol. At a Sydney auction on May 23rd, “Earth's Creation”, a painting by the late Emily Kame Kngwarreye, set an A$1 million ($820,000) record for the price of an aboriginal painting, showing that tradition and the market can indeed coexist.

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Mountains and money

The Iceman cometh not

May 31st 2007 | EVEREST BASE CAMP, NEPAL
From The Economist print edition

But Everest is still a big market opportunity

NUDE mountaineering will never catch on in the Himalayas. But it is the sort of thing that happens when climbing Everest ceases to be the exclusive preserve of an elite. Wim Hoff, a Dutchman also known as The Iceman, has had to abandon an attempt to hike up the world's highest mountain nearly naked. But over 50 fully-clothed expeditions are now huddled amid rock and ice at two base camps on either side of the mountain.

A reliable tally is not yet available, but probably more than 500 people scaled the peak during this year's brief climbing season, which is now concluding—exceeding even last year's bumper crop of around 450.The death of 11 climbers last year appears to have done nothing to put people off.

All this activity has created a flourishing micro-economy. “Everything to do with Everest is so expensive, man,” complains Dan Mazur, an expedition leader, as he fingers a $600 oxygen mask. His SummitClimb expedition costs clients $26,450. Some prices are as steep as $60,000. The Nepalese government charges $10,000 a client for a climbing permit. China has lured many climbers to the trickier north face by charging less than half that.

The tourism does seem to benefit—or at least enrich—the locals. Many Sherpa people, who live to the south of the mountain and worship it as the home of a goddess, send their children to boarding school in Kathmandu, and own second homes there. Villages near the mountain are Nepal's richest. Rare elsewhere, gold teeth are in vogue.

“Everyone is looking for a challenge,” says David Tait, a London hedge-fund manager who planned to execute a “double traverse” of the mountain this year. In the event he could only summon the energy to climb right over it once. “Technology makes the mountain more accessible. Personal wealth means more people can afford it,” he says.

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Dissent in China

The ghosts of purges past

May 31st 2007 | BEIJING
From The Economist print edition

Reuters

Dissidents detect a slight thaw. But no one is hailing a Beijing spring

Get article background

FLANKED by plainclothes policemen, a former top Chinese official, now a leading dissident, greets a foreign journalist outside his apartment building. The police are welcoming too. After noting down the visitor's identity, they allow him to proceed to the dissident's flat to interview him. Only a few months ago, journalists were strictly barred. China's curtain of repression is not lifting. But it is twitching.

This is a sensitive time of year in China. June 4th is the anniversary of the suppression of the Tiananmen Square protests in 1989. Most years since then, dissidents have tried to use the occasion to stage protests. Four days later falls the 50th anniversary of the “anti-rightist movement”, a sweeping campaign launched by Mao Zedong to crush dissent. As usual, the state-controlled press is under orders to ignore these dates. Party leaders do not want to revive memories of past repression.

The party still stamps on dissent. Human-rights activists and members of unauthorised religious groups are occasionally harassed or jailed. Liberal newspaper editors are sacked. Outspoken websites are closed down. Organised opposition to the party remains banned. But in the past few months, some dissidents say they have noticed an easing. One such is Bao Tong, the former senior official.

Party leaders have reason to be worried about what Mr Bao (on the right above) might say. He was a top aide to the late Zhao Ziyang (left), who was Communist Party chief until he was deposed in 1989 for being too soft on the Tiananmen protesters. Mr Bao was a member of the party's Central Committee and the highest-ranking official jailed (for seven years) for his role in the unrest. In a still tightly secretive political system, Mr Bao, now 75, knows where the party buries its bodies.

He links the authorities' decision to let him meet foreign—though not Chinese—journalists to this year's new regulations allowing the foreign media a freer rein in China around the Olympic Games in Beijing in August 2008. He does not see this as a big change of heart. Some 30 police are detailed to keep watch over him, he estimates. China is open, he says, as long as one does not criticise the party's leadership. Yet Mr Bao shows little restraint in attacking its corruption and repressive instincts, as well as one-party rule in general. Before Tiananmen, he says, liberal party officials reckoned there could be multi-candidate elections for the post of party chief by 2002. Now, he says, Chinese leaders are too afraid of losing control.

This fear is reflected in the party's refusal to address the complaints of victims of the anti-rightist movement. By the party's own—very conservative—estimate, more than 500,000 intellectuals were subjected to punishment ranging from criticism and dismissal from their jobs to forced labour and imprisonment. In 1981, five years after the death of Mao, the party ruled that the anti-rightist movement had gone too far; all but a handful of those labelled as rightists were rehabilitated. But the party still

maintained that it was right to have launched it.

Mao Yushi, a prominent economist, is one of 60 of the movement's victims who launched a petition earlier this year calling for the campaign to be declared unconstitutional. He says there has been no response from the party. Mr Mao, now 78, says the movement turned it into a “party of liars”, incapable of changing. Party leaders, he says, feel weak and are focused on maintaining stability. Any re-evaluation of the anti-rightist movement or of Tiananmen, they believe, could rock the boat.

Holes in the net

Yet both wittingly and unwittingly, the party is giving its critics more breathing space. The rapid spread of the internet has helped dissidents publicise their views and keep in contact. Hu Jia, a human-rights activist who campaigns for victims of HIV/AIDS, spent more than 200 days under virtual house arrest until early this year. His wife, Zeng Jinyan, posted reports on her blog. Mr Hu says police have this month again been stopping him from going out, except for a brief hospital visit, accusing him of threatening state security.

But it is becoming less common in Beijing for dissidents to suffer such tight restrictions. Liu Xiaobo, a former lecturer once described by China's media as a “black hand” behind the Tiananmen unrest, and now a prolific online essayist, says the police have left him alone since early March. For the past two years they were posted continuously outside his home between March and June. Ding Zilin, who organises a group of mothers of Tiananmen victims, says foreign journalists have found it much easier this year to visit her apartment without official interference. Last month the authorities allowed two Tiananmen activists, Chen Ziming and Ren Wanding, to visit Hong Kong—the first time they had been allowed to leave the Chinese mainland since 1989.

In recent months, Zhang Yihe, whose late father, Zhang Bojun, was one of the anti-rightist movement's most senior targets, has fought a spirited campaign against government censors after their attack on one of her books, about Chinese opera stars. Ms Zhang had apparently offended the powers-that-be with her previous writing about the sufferings of intellectuals, including her father, in the 1957 campaign. Her online attacks against the censors, and her unavailing attempt to sue them, were widely supported by Chinese internet commentators. Ms Zhang says she is proud her father was a rightist. And cross though she is at the censors, they have done wonders, she says, for her sales.

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Israel

It could all soon change—but stay miserably the same

May 31st 2007 | JERUSALEM
From The Economist print edition

AFP

The Labour party needs a leader, the coalition totters along and the opposition hopes to win a summer election

Get article background

THE political calendar in Israel is making the chances of renewing peace talks in earnest between Israelis and Palestinians in the near future look even bleaker than before. If Israel's coalition government falls apart soon, as it might, the right-wing Likud party under Binyamin Netanyahu, who has yet to accept even the notion of a Palestinian state, could return to power after a general election. But if the government holds together for longer, the uncertainty over how long it can last will itself deter peace efforts, especially those involving such influential countries as the United States.

As things now stand, discord in the Palestinians' ill-matched unity government between the Islamists of Hamas and their secular rivals in Fatah means that they are incapable of bringing militants who send rockets and suicide bombers into Israel to heel. Israel, for its part, refuses to discuss the future or to rein in its own forces until they do. So serious talks are off the table. The Palestinian president, Mahmoud Abbas, who also heads Fatah, continues to hold dutiful meetings with Ehud Olmert, the Israeli prime minister, but they look like leading nowhere.

The latest cause of Israeli uncertainty is that the Labour party, the junior partner to Mr Olmert's centrist Kadima in the ruling coalition, is choosing a new leader. Its current head, Amir Peretz, the embattled defence minister, is on the way out, having been defeated this week in the first round of his party's primary contest.

He is a former trade unionist, while the two men who beat him and face a run-off on June 12th are from the more traditional military mould of Israeli leaders. Ehud Barak, who got 36% of the primary vote, is a former head of the armed forces; Ami Ayalon, who got 31%, is a former chief of the navy and of the Shin Bet, the domestic intelligence service. Mr Peretz, who got 22%, may now be the kingmaker; it is unclear for whom he will urge his disciples to vote in the second round.

If Mr Ayalon wins, he says he will take Labour out of the coalition unless Mr Olmert resigns, thus provoking a general election. Mr Barak would be more likely to keep Labour on board. An opinion poll in early May, just after the damning initial report of a commission chaired by a judge, Eliyahu Winograd, that investigated last summer's botched war in Lebanon, gave both Labour and Kadima just 16 of parliament's 120 seats in a putative general election, while the Likud got 33. But another poll, which

asked people to choose between the Likud's Mr Netanyahu and either Mr Ayalon or Mr Barak, put the former Shin Bet chief just a few points behind Mr Netanyahu, while Mr Barak trailed.

The Labour party, which is electing its sixth leader in as many years, is riven by infighting and is ideologically adrift. Israeli voters think its main platform—to achieve a two-state solution negotiated with the Palestinians—is increasingly irrelevant. Mr Peretz was elected leader 18 months ago, promising to promote a leftist social agenda as finance minister in coalition with Mr Olmert's party; instead, the prime minister bounced him into the defence ministry, where he wrecked his and the party's image by mismanaging the war.

The new leader, who will take the defence job if Labour stays in the coalition, will need to repair that damage. Mr Barak was prime minister from 1999 to 2001; Mr Ayalon's political experience consists of only 14 months as a Labour parliamentarian. Mr Barak is a hawk who does not think a peace deal with the Palestinians is currently possible; Mr Ayalon, a relative dove who, together with Sari Nusseibeh, a Palestinian intellectual, proposed a plan in 2002 that was not too different from an initiative the Arab League offered that same year and promoted again more recently. Mr Barak is widely considered arrogant, scheming and tough, Mr Ayalon open-minded, honest and a bit politically naïve.

Mr Barak's reputation still suffers from his perceived failures as prime minister, among them the collapse of the Camp David peace talks in 2000 that led to the second Palestinian *intifada*, and a hasty end to Israel's 18-year military occupation of south Lebanon. The pull-out from Lebanon was popular at the time but laid the ground for last year's war. He may bet on a good spell as defence minister in Mr Olmert's government to revive his chances—especially if he acquits himself well in a new war this summer that some are predicting, either against Palestinian militants in Gaza or against Lebanon or Syria.

If Mr Ayalon wins the job, some think he would do the same and break his promise to pull out of a government led by Mr Olmert rather than risk losing a snap election to Mr Netanyahu that would throw Labour out into the cold. A Likud-Labour coalition is hard to envisage under those two men: on dealing with the Palestinians, the pair are too far apart.

So there may not be an election until after Mr Winograd's final report this summer. And if Mr Olmert can weather that storm and a number of lurking corruption scandals, as he has managed to do quite successfully so far, there may be no election until next year. On paper, a general election need not take place until 2010.

Either way, Israel may be in political limbo during a crucial period. The rest of this year is seen in the region as a last chance to resume an Israeli-Arab peace process before America goes into full election mode and its desire to be involved, still weak, vanishes altogether.

The Arab League's peace plan offers Israel full relations with all the Arab world in return for a comprehensive agreement with the Palestinians, but neither the Israeli nor the Palestinian leadership looks ready for it. Pressure is also growing in Israel to restart peace talks with Syria that collapsed last time round in 2000.

But the American administration, which has recently revived high-level contacts with the Syrian government, seems keener to use its final effective months in office discussing how Syria could be more helpful over Iraq and Lebanon than to waste effort on a more ambitious deal if Israel is not ready for it. If Mr Ayalon became prime minister, he might be more open to such proposals. Otherwise, the Americans look reluctant to get more deeply entangled in the hitherto thankless task of making peace between Arabs and Jews.

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Palestinians in Lebanon

A history of the hapless

May 31st 2007 | TRIPOLI
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Long the unluckiest of the lot

AFP

The howl of Palestinian despair

WITHIN the archipelago of misery made up by Lebanon's 12 Palestinian camps, Nahr al-Bared has been lucky. There were once 15 of the camps, which are not tent cities but dense warrens of breeze-block shanties. Three were flattened in Lebanon's civil war from 1975-90; their residents, descended from Palestinians who had fled the advancing Israelis in 1948, were made refugees twice over. Appalling massacres by Lebanese Christian militias, with the connivance of Israel, at Sabra and Shatila, on the fringes of the Lebanese capital, Beirut, laid waste to those camps. Attacks by everyone, from Israelis to Syrians to Christian and Shia militias, ravaged others. Not only was Nahr al-Bared the only camp spared in those dark times, it prospered afterwards as a de facto free zone whose traders undercut competition by evading Lebanese taxes.

Yet if there was ever an accident waiting to happen, this is it. “When illness attacks a body, it goes for the weakest part,” explains a Palestinian activist. At Nahr al-Bared, where a ten-day long Lebanese army siege of a radical jihadist cult has left at least 80 people dead, the ingredients for violence—already in place in the region, more focused in Lebanon, and still more obvious in its Palestinian camps—are even more concentrated and combustible.

One ingredient is the despair of Lebanon's 420,000 Palestinians (this UN figure is widely disputed, with some saying a quiet exodus has reduced it to 250,000). Not only has the hope of returning to Palestine faded since the collapse of peace talks with Israel in 2000; living conditions have deteriorated too. The lot of the 4m or so UN-registered Palestinian refugees elsewhere in the diaspora—in Jordan, Syria and in the Israeli-controlled territories—has hardly been happy. But in Lebanon their treatment has been notably harsh.

Second-class citizens

Local laws give Lebanon's Palestinians a raw deal, reflecting fears that assimilating them could upset Lebanon's own delicate sectarian balance, since they are overwhelmingly Sunni Muslim. They have no right to own property and no right to state schooling or medical care. They are banned from white-collar professions, and even from many unskilled jobs. A Palestinian may own a taxi, for example, but cannot legally drive it. As one Palestinian says of the Lebanese, “They are all with Palestine, but against the Palestinians.”

Recent developments have increased the poverty imposed by such strictures. The budget for the United Nations Relief and Works Agency for Palestine Refugees in the Near East, better known as UNRWA, founded in 1949, has been stretched because of the chaos in the Gaza Strip and the West Bank, the two Israeli-controlled bits of a would-be Palestinian state. As one result, class sizes in the schools that UNRWA runs in Lebanon have soared.

Those troubles have also slashed spending by Palestinian agencies that once, under the umbrella of the Palestine Liberation Organisation (PLO), supported an elaborate bureaucracy and security apparatus in Lebanon's camps. Foreign donors who might have helped out diverted spending towards dealing with the widespread destruction wrought by Israeli bombing in last summer's war.

Making matters worse, the camps have grown more lawless. Lebanese still complain that the PLO, which secured the camps under a deal brokered in 1969 by the Arab League, helped provoke their country's

civil war by seizing other parts of Lebanon. But the departure of the PLO's leader, Yasser Arafat, in the mid-1980s, forced by both Israel and Syria, left a power vacuum. It was mostly filled in the 1990s by Syrian military intelligence, whose favoured method of control was to set different factions on each other.

Syria's troop withdrawal in 2005, following huge protests in Beirut, left many camps with no effective administration. The Lebanese had their own security problems, and said that the 1969 agreement absolved them of responsibility. The Palestinians grew more divided than ever. The split between the Islamists of Hamas and Arafat's secular Fatah in the Israeli-occupied Palestinian territories was not only reflected in Lebanon, but was exacerbated by continued Syrian meddling and by the emergence of more extreme factions.

The camps became a magnet for groups which, in the words of one weary resident, “seek a better future in the next life”. With the failure of the secular parties and even of Hamas to achieve peace, victory or a modicum of prosperity, youths turned to ideologues who had broken away from Palestinian nationalism to invoke instead the power of pan-Islamist fervour.

Many naturally turned to Nahr al-Bared. Not only was PLO influence weakest here, but the camp happens to sit close to the frontier with Syria, which has become the main transit route for jihadists seeking action in Iraq or returning from its mayhem. It is also just outside Tripoli, a large, poor and predominantly Sunni city that has itself become a hotbed of Islamist radicals. Joined by hundreds of militants who flocked to Nahr al-Bared in recent months, very few of them Palestinian, the radical cult that calls itself Fatah al-Islam has vowed to fight here to the death. Nahr al-Bared's luck, it seems, has run out.

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Iraq

Toe-dipping diplomacy

May 31st 2007 | DUBAI
From The Economist print edition

No one knows if the latest talks will lead anywhere

Get article background

THIS week, the American and Iranian ambassadors in Baghdad sat down for their first publicly acknowledged talks since the two countries severed relations 28 years ago. Their four-hour discussion, strictly limited to Iraq, was the culmination of more than a year of diplomatic manoeuvring. The Americans had said they would be willing to talk to the Iranians provided they did not try to slip other topics, notably their nuclear activities, into the conversation. Until recently the Iranians had played hard to get, sometimes sounding keen to talk but at other times saying brusquely that they saw no point. But when the two finally did sit down eyeball-to-eyeball in Baghdad, it was the Iranians who seemed keener on diplomacy.

The Iranians walked out of the conference smiling and confidently predicted more meetings. By contrast, the American ambassador, Ryan Crocker, said he had told the Iranians bluntly to stop sending weapons across the border, a warning to which Tehran's envoy apparently did not respond. Instead, the Iranians suggested a triangular mechanism be set up so that they, the Americans and the Iraqis could keep discussions going. The Americans said they would first like to see Iranian-supplied bombs stop exploding in Iraq.

One reason for Iran wanting to institute a diplomatic process is to persuade the Americans that it has a valid and permanent security interest in Iraq. Iran is particularly annoyed by the detention of five Iranians, who it says are bona fide diplomats, arrested by the Americans in January in Iraqi Kurdistan on suspicion of helping militant groups. The Americans still say they will be treated like any other suspected lawbreakers. If this issue and other grievances become part of a wider bargaining scene, the Iranians may try to get the Americans to acknowledge an Iranian sphere of influence in Iraq, which the Americans remain loth to do.

Meanwhile, Iraq's government says it doubts it will soon follow up the series of international conferences on Iraq, the latest on May 3rd-4th in the Egyptian resort of Sharm el-Sheikh. It produced bland declarations of support for Iraq's government, but several of the neighbouring countries' governments remained reluctant to write off their share of Iraq's $50 billion debt.

Iraq's neighbours say they want to follow up the Sharm el-Sheikh meeting by creating three regional committees to deal with security, refugees and oil. It is not yet clear who would sit on them: all the neighbours—Iran, Jordan, Kuwait, Saudi Arabia and Turkey—would probably do so, along with the United Nations. But the United States, Britain and the European Union would probably not. Some Europeans want to set up a “contact group”, rather like the five-country one that sought a settlement for the former Yugoslavia in the 1990s. But the Americans are reluctant to see their power shrink to accommodate such a multilateral approach.

Another big snag is that several governments in the region, particularly the Saudi one, loathe Nuri al-Maliki, Iraq's prime minister, and want him out, seeing him as a Shia triumphalist determined to cut the Sunnis out of power and to oversee the sectarian cleansing of Baghdad, from which tens of thousands of Sunnis have already fled. Adel Abdul Mahdi, a Shia who is one of Iraq's two vice-presidents, has been touted as a replacement for Mr Maliki. But the Americans seem determined, for the moment, to stick with Iraq's current prime minister, however dismal his record at reaching out to the Sunnis.

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Somalia

No peace, more terror

May 31st 2007 | NAIROBI
From The Economist print edition

A violent Islamist threat is far from over

AFP

The child of a failed state

Get article background

IN MARCH and April about 400,000 Somalis fled their capital, Mogadishu, as Ethiopian forces backing Somalia's transitional government razed whole districts in an attempt to destroy the country's remaining Islamist militants. That offensive came only months after the Ethiopians claimed to have defeated Somalia's ruling Union of Islamic Courts in a stunningly swift campaign at the end of last year. Despite Ethiopia's latest claims of success, the country is in as perilous a state as ever.

Peace-making is still fraught. A national reconciliation conference of clan elders planned for June 14th will not take place, partly because Mogadishu remains too dangerous for any public gathering. Little is expected of a forthcoming meeting of Somalis and foreign countries' representatives in London. One stumbling block is that Somalia's president, Abdullahi Yusuf, and his prime minister, Mohamed Gedi, are still reluctant to talk to the more moderate of their Islamist opponents. Instead, they seem keener to divide and rule, especially the powerful Hawiye clan which predominates in Mogadishu.

In any event, it is uncertain whether the Islamist militants are in a mood to negotiate; despite their losses, they are becoming more effective. The remnants of the Shabab, the Islamic Courts' zealous armed wing, are more aggressive and better organised than before. Ethiopia says its troops killed at least a thousand Shabab fighters in March and April, though human-rights groups say most of the 1,670 recorded dead were civilians. Either way, the ferocity of the Ethiopian offensive forced the Shabab (meaning “youth” in Arabic) to adopt Iraqi-style insurgent tactics, carrying out hit-and-run raids, planting land mines and even using suicide bombers, all of which are new to Somalia. Western intelligence sources say the Shabab has turned itself from a conventional outfit that was clobbered in conventional fighting into a terrorist-type group using the al-Qaeda cell system: 20-30 men in a cell, rotating in and out of the front line, with better intelligence and more sophisticated training.

This is bad news for most Somalis—and for Uganda. It has 1,500 peacekeepers in Mogadishu as part of an African Union mission which is supposed to replace the Ethiopians, whom most Somalis detest as invaders. The Ugandans were to have been backed up by other African forces but none has shown up. Uganda's president, Yoweri Museveni, has resolved to keep his troops, five of whom have been killed, in the line of fire.

But without a comprehensive agreement over Somalia, the present maelstrom could draw in more east African countries and also America, which has already sent special forces to hunt for al-Qaeda suspects there. Al-Qaeda has long tried to incite a *jihad* against “Christian” Ethiopia and to foster terrorist cells on the Swahili coast, particularly in Kenya. A religious war in Ethiopia looks unlikely right now; Christian-Muslim relations seem fairly stable. But no one knows what success al-Qaeda has had in finding recruits among Kenya's coastal Muslims. Plainly, potential terrorists can still move easily back and forth between Kenya and Somalia. Islamist terrorism in Addis Ababa and Nairobi now seems horribly likely.

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Sierra Leone

Justice at last?

May 31st 2007
From The Economist print edition

The trial of Charles Taylor, Liberia's former president, starts in The Hague

Get article background

THE wanton violence during Sierra Leone's 11-year civil war was exceptionally barbaric. Rebel armies hacked off limbs, carving their initials into the victims' flesh as a warning to others. Children, some as young as eight, were forced to batter their parents to death, then eat their brains before being sent to the front or used as sex slaves. Anything to terrorise the civilian population.

Women's vaginas were sewn up with fishing lines, villagers' mouths clamped shut with padlocks. Drug-crazed soldiers would rip open pregnant women's stomachs after taking bets on the sex of the foetus, then parade the little heads on pikes. At least one man was skinned alive before his flesh was picked off and eaten. Thousands of young girls and women were repeatedly raped, thousands more people burned alive in their thatched-roofed homes. Between 50,000 and 200,000 were killed and more than a third of Sierra Leone's 6m people forced to flee.

On June 4th, more than five years after the end of the war and four years after he was first indicted, the man accused of responsibility for many of these horrors will stand trial in The Hague. Charles Taylor, Liberia's former president and once Africa's most notorious warlord, is facing 11 counts of crimes against humanity and war crimes for his alleged role in planning, financing and commanding a campaign of terror in Sierra Leone to overthrow its government and seize control of its vast diamond mines. Mr Taylor pleads not guilty.

Unlike the ten others charged by the Special Court for Sierra Leone, a “hybrid” war-crimes tribunal set up jointly by the UN and Sierra Leone in 2002, Mr Taylor will not be tried in Freetown, Sierra Leone's capital, but in a courtroom on loan from the International Criminal Court in The Hague. This is because of concerns that his presence in west Africa could destabilise a region where he still wields influence, especially in neighbouring Liberia.

Some human-rights groups say that such trials must be held as close as possible to the victims. But people in Freetown, scene of some of the worst violence when the rebels took the town in 1999, seem to care little about where justice is done, as long as those most responsible are held to account. In their view that means, above all, Charles Taylor, now aged 59, even though he is not known to have set foot in Sierra Leone throughout the entire conflict.

The biggest challenge for the prosecution, headed by Stephen Rapp, an American who was the chief prosecutor at the International Criminal Tribunal for Rwanda, will be to prove a clear line of command from Mr Taylor to the rebel militias. He knows that on this point he will be most liable to attack by Mr Taylor's defence team, led by Karim Khan, a British barrister specialising in international law. Mr Rapp, backed by some 32,000 pages of evidence and the testimony of 139 victims, feels he has a strong case.

After military training in Libya, courtesy of Muammar Qaddafi, Mr Taylor returned to his native Liberia in 1989 at the head of a then small guerrilla force, the National Patriotic Front of Liberia, with the aim of overthrowing Samuel Doe's brutal dictatorship. But he needed money, so the lucrative diamond mines in neighbouring Sierra Leone beckoned. In 1991, he joined up with a Sierra Leonean rebel group, the Revolutionary United Front, and oversaw the invasion of Sierra Leone. The prosecution says that Mr Taylor controlled everything throughout the conflict, even after becoming Liberia's president in 1997.

After being charged with war crimes by the Special Court in 2003—Africa's first sitting head of state to be so indicted—he fled into exile in Nigeria. But under mounting international pressure, Nigeria sent him to the court in March last year. “This sets a serious precedent,” sighed his former mentor, Mr Qaddafi. “This means that every head of state could meet a similar fate.” Quite so.

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Mali

Libraries in the desert

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Preserving ancient literature in the desert

AFP

The imam of manuscripts and mosque

ANCIENT and mystical as Timbuktu may be, these days it leaves many a traveller hot and even a bit disappointed. Yet it still houses some amazing treasures. Among them, in old family homes, is a wondrous literary past that was in danger of disappearing but may now, with luck, be preserved.

Scholars are scrambling to preserve thousands of manuscripts that detail daily and academic life hundreds of years ago on the edge of the Sahara desert. Hidden from Moroccan invaders in the 16th century, French colonisers in the 20th and random thieves and tyrants in-between, bundles of old documents are at last being recovered and conserved in new libraries in Timbuktu.

More than 150,000 manuscripts, dating back as far as the 12th century, tell of battles, astronomy, the sciences and the music of the day. “We must preserve them because it is our history,” says Abdulrahman Ben Essayouti, imam of Timbuktu's Great Mosque. “Writing remains but stories disappear. It's not just for Timbuktu but for all Muslim culture.”

Written mainly in Arabic but also in some African languages, the documents are being collected in public and private libraries. Visitors can inspect a 12th-century copy of the Koran written in gold or a manuscript written on a gazelle's skin when paper was scarce.

Timbuktu was established over 1,000 years ago as a seasonal camp for Tuareg nomads. Before long it became a famously rich town, bustling with gold, ivory and slave traders. It also drew Muslim scholars from across the world; in its prime, the University of Sankore boasted 25,000 students. “It was a melting pot of cultures,” says the imam.

But the sacking of Timbuktu by the Moroccans at the end of the 16th century led to its demise. The manuscripts were scattered across the desert, where fleeing families hid them in chests or elsewhere in their homes—for hundreds of years. As a result, the history they told was increasingly transmitted orally, from generation to generation. Now, as scholars persuade owners to set up the libraries, it may again be read on paper.

Timbuktu is still isolated, and Mali is one of the world's poorest countries. Aside from a handful of tourists, salt caravans from across the desert and, nowadays, American soldiers on anti-terror exercises, it has few visitors. But this may change. “If we conserve these documents, people will come to read and understand more,” says a scholar, Abdul Kader Haidara. “And people will realise that Islam is a tolerant religion.”

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Italy and the Catholic church

By hook or by crook

May 31st 2007 | ROME
From The Economist print edition

Peter Schrank

A resurgent Vatican's influence in Italy

Get article background

AS ITALY'S bishops concluded their general assembly on May 25th, some may have reflected on an irony in their situation. In a secular age, and 13 years after the collapse of the Christian Democratic party that used to represent their interests in politics, the church wields more direct influence in Italy than at any time in 40 years.

Over the past three years, church leaders and their parliamentary allies have fought three big battles and lost none. In 2004 a cross-party group of lawmakers drastically restricted the scope of a law on fertility treatment. A year later, the head of the church in Rome, Cardinal Camillo Ruini, deftly foiled a bid to broaden the law in a referendum (he asked the faithful to abstain, robbing the vote of its quorum). And in February, when a former prime minister, Giulio Andreotti, now a life senator and ever the church's political man, nudged Romano Prodi's centre-left government close to defeat, the coalition dropped as a priority its plan to extend legal rights to unwed couples, including gays.

Under Cardinal Ruini's successor, Angelo Bagnasco, Italy's prelates are preparing for a fight against a law to allow living wills, which set out how people wish to be treated if they can no longer communicate with doctors themselves. At the general assembly, Archbishop Bagnasco's deputy, Giuseppe Betori, claimed that such wills represented “a dangerous slide towards something like euthanasia”.

Vatican officials say Pope Benedict is determined to stop Italy following Spain under the Zapatero government, which legalised gay marriage and made other social reforms at odds with Catholic teaching. The pope sees Italy as uniquely emblematic of Roman Catholicism and thus ideal ground for an attack against the creeping secularisation of Europe. Italy's contorted politics may make this easier.

The Prodi government's hold on power is feeble (and became feebler this week after it took a drubbing in local elections, especially in the north). It depends on unelected life senators for its majority in the upper house and so is vulnerable to even a small rebellion on its own side. This includes a tiny Christian Democratic party, the UDEUR, and a band of traditional Roman Catholics in the otherwise liberal Democracy and Freedom party, who are known to the media as the “Theo-Dems”. Were they to vote against the government on any measure distasteful to the bishops, they could join the centre-right opposition in bringing it down.

That may seem odd. After all, Silvio Berlusconi, the opposition leader, is eminently secular. Before entering politics, his friendships were mostly with Socialists, not Christian Democrats. He is divorced and had three children by his present wife before their (civil) marriage. Only one of the four parties in the coalition government that he led until last year was particularly Catholic: the Union of Christian Democrats.

But, argues Stefano Ceccanti, a law professor who helped to draft the law on unmarried couples, “the centre-right is very weak ideologically and it finds unity in agreeing with the church”. Italian conservatives shrink from free-market liberalism. The creeds that gave them their ideological underpinnings—fascism and Christian Democracy—have been discredited. Championing Catholic causes now helps both to woo Catholic voters and to divide Mr Prodi's heterogeneous coalition, which stretches from the Theo-Dems to Trotskyists. Conservatives, including non-believers, also consider a church led by Pope Benedict to be a stout bulwark against Islamic fundamentalism.

On other issues, too, there is an overlap between the views of the centre-right and those of the church. Ezio Mauro, editor of the daily *La Repubblica*, has accused Cardinal Ruini of pulling the church to the right. Indeed, the bishops' most passionate defender in recent months has been another daily newspaper editor, Giuliano Ferrara of *Il Foglio*, a former Berlusconi minister who is an atheist. “Without being a Catholic”, he says, “I think many Catholic things.”

How far can the bishops go to impose Catholic views on society? Church leaders often behave as if Italy were still as homogeneously Catholic as in the days when every Italian home had a crucifix above the marital bed and a black-and-white television from which Pius XII would occasionally bestow a restrained wave. After church groups rallied several hundred thousand people to a family day in Rome on May 12th, Archbishop Bagnasco declared smugly that it was “society expressing itself in an unequivocal way”.

Yet today's Italy has one of the world's lowest birth rates, thanks to near-universal defiance of Vatican teaching on contraception. A quarter of young cohabiting couples are unmarried. Church sociologists insist that the share of Italians attending mass at least once a month remains steady at 50%, but a study publicised in February suggests that the true figure is lower (23% in the patriarchate of Venice, where the research was conducted).

“The whole of society is not Roman Catholic,” says Marcello Vigli, a lay activist and veteran of the Christian Social movement. “So you cannot impose by law what the hierarchy considers to be right. Otherwise, you start to become a confessional society.” To Giuliano Ferrara of *Il Foglio*, such a view is pure hypocrisy. “If the church has a right to say what it thinks, it also has a right to be on the political scene. What it does not have is a right to coerce.” Many Italians would agree. But some argue that it does, in practice, coerce. In March Archbishop Bagnasco's office in effect told those politicians who consider themselves Catholic to vote against granting legal rights to unmarried couples.

His supporters retort that he was merely reminding lawmakers of church teaching; and that, in any case, the bishops' position coincided with the dominant social view (47-45% against the bill, said a poll in another daily, *Corriere della Sera*). But Archbishop Bagnasco's warning caused deep resentment among supporters of the measure, all the more so after he appeared to bracket them with apologists for paedophilia and incest.

Soon after that remark, threatening graffiti appeared on the door of his cathedral in Genoa. He then received an envelope containing a bullet and the symbol of the Red Brigades' terror group. He has now been given an armed police guard. Addressing the bishops' assembly, Pope Benedict said that “the Catholic faith and the church's presence remain the great unifying factor of this beloved nation”. Of late, it has not always seemed that way.

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Ireland's election

The Teflon taoiseach rides again

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Bertie Ahern wins it once more for Fianna Fail

ON MAY 25th Bertie Ahern slept late, as a two-day vote-count began for 166 members of the Dail (parliament) after the Irish general election. By the time the taoiseach (prime minister) awoke, his Fianna Fail party had scored a third successive victory—and he had won his most remarkable electoral triumph. The bookmakers were already paying out, although the opposition had yet to concede defeat.

AP

Bertie battles past the voters

Mr Ahern's leadership in the final ten days of the campaign, notably in winning a television debate with the opposition leader, Fine Gael's Enda Kenny, proved decisive. In 90 minutes the more experienced man persuaded wavering voters that a change of government might imperil the Celtic tiger's economic success (fast growth, low unemployment, low taxes).

Ultimately a desire for change that was evident in the electorate at the start of the three-week campaign failed to translate into a vote for change. A conservative country, more affluent but also more risk-averse, preferred continuity instead. One exit poll found a late swing to Fianna Fail. A quarter of the voters waited until the final week before making their mind up, and half of these backed the ruling party. Even his opponents accepted that it was the Bertie factor that swung it.

Mr Ahern's re-election as taoiseach on June 14th seems assured. He will probably lead a minority centre-right coalition, backed by independents, in partnership once again with the Progressive Democrats, a small liberal party that managed to lose both its leader, Michael McDowell, and three-quarters of its deputies. If such a coalition serves a full term, Fianna Fail, which has already been in government for two-thirds of Ireland's life since 1922, will by 2012 have racked up almost 23 out of the previous 25 years in power.

Just three weeks ago, the odds were stacked against such an outcome. Mr Ahern's timing was off, his campaign was in disarray, and he faced embarrassing allegations about undeclared loans and gifts received when he was finance minister in the 1990s. These claims surfaced again this week at a tribunal investigating payments to politicians. Tribunal lawyers have contradicted the taoiseach's explanations of some of his transactions at the time.

Yet after this nightmare start, Mr Ahern choreographed the finish to perfection. A statement on his personal finances marked a turning-point. In May an address to both British houses of Parliament in Westminster added to his stature as a statesman. Testimonials from Bill Clinton and Tony Blair on his role in the Northern Ireland peace process were another boost.

What began as a normal election ended as a presidential battle between the leaders of the two main

parties. In the process the smaller parties were squeezed. Labour and, more surprisingly, Sinn Fein both lost seats and the Greens were unchanged. Among opposition parties only Fine Gael, which gained 20 seats to recover much ground lost in 2002, could be satisfied.

Sinn Fein had hoped that its deal to share power with Ian Paisley's Democratic Unionists in the restored Northern Ireland executive last month would improve its prospects. But its forecasts of a doubling of its seats in the Dail to ten crashed: the party actually lost one of its five seats. In debate Sinn Fein's leader, Gerry Adams, showed little grasp of policy issues and none at all of economics.

As it happens, the OECD has recently struck a cautionary note on the buoyant Irish economy, suggesting that harder times may lie ahead, with a cooling housing market depressing tax revenues and putting the public finances under pressure. The minority government that Mr Ahern now plans to form may have to take some much tougher decisions than either of its predecessors.

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Hungarian police

Of cops and spies

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Efforts to clean up Hungary's police and security forces

Reuters

IT HAS been a bad couple of weeks for Hungary's police and spies. The prime minister, Ferenc Gyurcsany, has sacked the national police chief, Laszlo Bene, and the head of the Budapest police, Peter Gergenyi. The justice minister, Jozsef Petretei, has resigned, as has the head of the domestic security service, Lajos Galambos.

The two police chiefs were dumped after scandals. Five police officers were detained after the alleged rape of a 21-year-old woman in Budapest, who said they had first demanded money and that one of them had then raped her and another forced her to perform oral sex, as the other three looked on. In another case, a police officer was convicted of robbing a bank after he was sent to deal with an armed robbery. And 13 traffic policemen have been charged with taking kickbacks from breakdown rescue services.

Confidence in the police force has plummeted. As so often, the authorities were reluctant to take the young woman's claims of rape seriously. “Cries Unheard”, a recent report from Amnesty International, cited a Hungarian police adviser saying that 85% of women who claimed to be raped were “whores” who could not agree on a price. The report also quoted a female judge with 20 years' experience saying she would be reluctant to report it if she were raped: “It is very difficult because of the procedures, the attitudes and social conventions. It is the victim who has to defend and prove everything.”

Human-rights groups say that Hungary's police have not been properly reformed since the collapse of communism. Less than 10% of reports of police violence filed to prosecutors lead to charges. Corruption is widespread, especially among traffic police. Many drivers can recount demands for on-the-spot payments that go straight into a policeman's pocket; drunk drivers can sometimes buy their freedom for only 20,000 forints ($110).

Andras Kadar, of the Hungarian Helsinki Committee, says there is a culture of impunity among police officers, who are loyal to each other and reluctant to investigate alleged wrongdoing. In April the European Court of Human Rights ruled against Hungary for not looking into claims made by a Briton of police brutality. The opposition Fidesz party has been calling for new leaders to head the police force since riots last autumn saw unprecedented police violence. Some 40 officers are under investigation for their role in those events. Fidesz is demanding a parliamentary investigation into the latest scandals.

Apologists argue that a new generation of officers is coming up through the ranks. Western advisers working with the police report progress against organised crime. The security services, with agents trained by Western experts in counter-terrorist techniques, are valued for their expertise in the Balkans. Yet that did not save Mr Galambos when spooks harassed a journalist investigating a new villa for Gyorgy Szilvasy,

head of the prime minister's office; or when it emerged that officers were involved in a dodgy charity importing food from East Asia. According to the customs service, a rare institution untainted by scandal, the food was not donated, but sold. Tellingly, Jozsef Bencze, who is replacing Mr Bene as national police chief, comes from the customs service.

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Montenegro, one year on

The birthday country

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From The Economist print edition

On its first birthday, Montenegro looks reassuringly normal

Get article background

AN EXTRAORDINARY change has come over Montenegro since it voted for independence a year ago. For a decade its 650,000-odd people talked of little else. In the cafés of Bosnia, Serbia and Kosovo, debate still centres on issues left unresolved after the collapse of Yugoslavia. But Montenegrins have escaped from all this—to talk instead of such mundane matters as house prices, jobs and stockmarkets. “Now there is no excuse,” Milka Tadic, a journalist, adds. “We cannot say things are Belgrade's fault any more.”

A year ago dire predictions were made that the one-third of Montenegrin citizens who declared themselves Serb would resist the proclamation of the new country. Yet the parties that fought to stick with Serbia have since been in disarray. Public discussion on a new constitution has just concluded. Outstanding issues include the place of the Serbian and Montenegrin Orthodox churches, and the language people speak: Serbian, Montenegrin or Serbian-Montenegrin. Since either a two-thirds majority in parliament or a referendum is needed to replace the present constitution, more horse-trading is in prospect.

For 15 years the most powerful man in Montenegro was Milo Djukanovic, either as prime minister or as president. Yet after winning the referendum and the subsequent election, he stepped down, to the anger of those who might have voted differently had they known of his plans. Since then he has stayed officially only as head of his party. Yet he is believed still to exercise huge influence over the running of the country, not least because Zeljko Sturanovic, the prime minister, is suffering from lung cancer.

A tiny elite in Montenegro has profited from privatisation to become rich and powerful. The price of property in Podgorica and elsewhere is shooting through the roof as Montenegrins sell scraps of land near the sea or ski resorts to British, Irish and Russian investors. Sanja Elezovic of the Open Society Institute frets that there is “no strategic thinking about the environment” and that, unless planning controls are strictly enforced, much of the beautiful coastline will be wrecked.

Nepotism is another concern. It is hard to get ahead without connections. Organised crime and corruption are also a worry; appointments to the judiciary can be dubious. Ethnic minorities complain that, although the government courted their votes before the referendum, it is reneging on promises to improve their lot.

Despite such grumbles, real GDP growth is put at 6.5% for 2006, much of it driven by tourism, construction and services. Infrastructure is cracking at the seams, but roads are being resurfaced and a campaign has started to clean up this often garbage-strewn country. Montenegrins moan about their standard of living, but few think they are worse off than a few years ago. Official unemployment is 14.6%, although the figure is unreliable. What is clear is that there are plenty of jobs Montenegrins will not do. Every year thousands of Bosnians, Serbs, Kosovars and Albanians pour in to work in construction, the tourist industry or agriculture.

Montenegro has joined the United Nations, the World Bank and the IMF, and initialled an agreement with the European Union. It has taken the first steps towards joining NATO. Slowly it is becoming normal—which is more than can be said for most of its immediate neighbours.

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Ukraine's political crisis

A truce, for now?

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There may be an election in September, but it might not solve any problems

Get article background

FOR a man trapped in a political crisis, Viktor Yushchenko, the president of Ukraine, seems calm, almost philosophical. But then political crises have become the norm in Ukrainian politics ever since he was swept to power after the “orange revolution” in 2004-05.

One outcome then was a political deal to transfer much presidential power to the parliament. That deal lies behind the struggle that culminated in Mr Yushchenko's decree in April dissolving parliament and calling a fresh election. Mr Yushchenko says he had no choice but to act after Viktor Yanukovich, whom he defeated in 2004 but who returned as prime minister two years later, had used “bribery and pressure” to amass an illegitimately big majority in parliament. “[They] thought it would be possible to violate the constitution and establish a majority in a non-constitutional way, but that no dissolution of parliament would follow. That was a mistake,” says Mr Yushchenko. The prime minister's camp retort that the president has exceeded his powers.

Both sides appealed to the courts. Legalistic arguments brought them to the brink of violence last week after Mr Yushchenko sacked the prosecutor-general and tried to consolidate his grip on the security services. Mr Yanukovich, who has authority over the police, ordered armed commandos to restore order. Yet the tussle between two branches of the security services had a sobering effect on both men. “Both sides got scared, not even about the consequences of a potentially violent clash, but by the very fact that it could take place,” says Petro Poroshenko, an ally of the president.

In the small hours of May 27th, Mr Yanukovich and Mr Yushchenko declared a truce. They agreed to hold an election on September 30th. But this truce was followed by more parliamentary squabbling and prevarication. The deadline for agreeing a September election came and went, the fate of the prosecutor-general was undecided and the interior minister, an ally of Mr Yanukovich, reportedly had a heart attack. Even if the election goes ahead in September, it is unlikely to change the political constellation in Ukraine enough to resolve the country's underlying divisions.

So far, at least, the political crisis in Ukraine has remained only that. The people who three years ago gathered on Kiev's Independence Square to support the orange revolution are now, like Mr Yushchenko himself, resigned and philosophical about what they regard as a political circus. The bigger concern is no longer a violent counter-revolution: it is that all the political parties will forfeit the trust of their people.

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French politics and the media

Nouveau Grub Street

May 31st 2007 | PARIS
From The Economist print edition

Scandals over politicians' links to the media hide those with defence firms

Get article background

“A BERLUSCONIAN practice!” declared a Socialist. “Extremely shocking,” said the journalists' union. The appointment of Laurent Solly, a former campaign director for Nicolas Sarkozy, to TF1, France's top television channel, has reignited debate on links between politics and the media. Oddly there is less concern about ties between politics, the media and defence firms.

Mr Solly's nomination was clumsy. Bouygues, the broadcaster's parent group, says he will not go straight to TF1, which has a 30% audience share, but begin with an “induction programme” within the group. Yet one of the new president's closest advisers will have a top slot at France's foremost broadcaster. The head of the group, Martin Bouygues, is an old chum of Mr Sarkozy's.

AFP

Schönberg reads no more

Cosy ties between politicians and the media are common. Journalists often serve as ministerial advisers. Mr Sarkozy has picked one, as has his prime minister, François Fillon. Béatrice Schönberg, a newsreader at France 2, the public broadcaster, married a minister, Jean-Louis Borloo, in 2005. But the fashion is to avoid conflicts of interest. Ms Schönberg says she will not return to newsreading now that her husband is finance minister. Coincidentally Christine Ockrent, another news presenter, is moving to a new show (her partner, Bernard Kouchner, is now foreign minister).

Even so the opposition is crying foul. François Hollande, the Socialists' boss, wants a law to “curb press concentration” and impose new “ethical rules”. In reality, media concentration is little worse in France than elsewhere. The top three television groups control 81% of the market, compared with 70% in Britain and 91% in Germany, according to a recent report. Market concentration in the national press is similar. Anyway many French journalists lean to the left. In his campaign, Mr Sarkozy was as demonised in the left-wing media as he was given an easy ride by the right.

More troubling are links between politics, the media and missiles. The Lagardère Group, which owns *Le Journal du Dimanche*, *Paris Match* and a radio station, Europe 1, still has a stake in the aerospace group EADS. Arnaud Lagardère is another friend of Mr Sarkozy's; journalists at *Le Journal du Dimanche* are embroiled in a row over interference in a censored story about the president's wife, Cécilia. The Dassault Group, whose aviation division makes Rafale and Mirage fighters, owns 87% of Socpresse, which includes *Le Figaro* and many regional titles; Serge Dassault is a senator from Mr Sarkozy's party. With defence firms so dependent on government contracts, these conflicts of interest ought to generate more censure in France than they do.

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Charlemagne

In search of an immigration policy

May 31st 2007
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Peter Schrank

The European Union needs to hold a proper debate on immigration

AS A rule, when a plan in Brussels makes little or no sense, there are two possible explanations. The first is that the whole idea is nonsense. The second is that the muddle is really a proxy for something more interesting: an ideological fight within the European Union that has not yet been resolved. With luck, proxy fighting explains the incoherence of the European Commission's latest ideas on immigration. These call for better management of flows into the EU, with the help of two ugly bits of jargon: “circular migration” and “mobility partnerships” between the EU and third countries.

Leave aside the issue of whether governments can “manage” this phenomenon at all. (Even America finds this hard; see article. And Italy this week had to rescue two dozen shipwrecked Africans clinging to a tuna pen in the Mediterranean, after Malta and Libya could not agree over who should save them.) It is bad enough trying to resolve the contradictions in the new plan.

Read the fine print with the eyes of a liberal (in both the economic and social senses), and you might come away reassured. The union seems to view migration as a benign exchange: in one direction, labour to meet growing gaps in Europe's jobs market; in the other, a flow of remittances and knowledge to some of the world's poorest countries. Circular migration, the commission explains, is a way of working with poor countries to avoid a “brain drain” (eg, luring expensively trained nurses and doctors from Africa to prop up Europe's health services). It is meant to make sure that the brainiest can have spells back home without jeopardising the residence rights they have in Europe.

Mobility partnerships spread this kindly approach to the less skilled. Pilot projects include opening a job centre in Mali to spread word of job opportunities in Europe, so that adventurous young men can choose a legal route to work instead of the perilous one of a people-smuggler's boat.

Being kindly is also a marketing tool. Europe has for years struggled to compete with America, Canada and Australia to lure the most sought-after workers. Later this year, the commission is expected to propose its own version of the American green card, an EU “blue card”, which would offer free movement around Europe to skilled migrants.

Yet study these proposals with a more hawkish eye, and the EU appears to agree with you too. Circular migration, the commission explains, will be the model for a new piece of legislation for seasonal migrants (the low-paid folk hired to pick strawberries in Italy or haul cement on Spanish building-sites). No talk of

brains being drained here: rather, there is the promise that “circular stays circular”, to quote one Eurocrat, meaning that foreigners are sure to go home when their contracts expire, without any right to bring in their families or to claim welfare benefits. These are “temporary work opportunities”, explained the commissioner for justice, freedom and security, Franco Frattini, as he launched the proposals.

At last, the penny drops: this is a guest-worker plan, given a spiffy new name to distance it from past *Gastarbeiter* programmes, with their legacy of Dutch and German housing estates filled with Turkish or Moroccan workers who have never been fully integrated into society, because they were never expected to stay. Ah, but this is different from such old schemes, explain officials. This time, most will go home. Technology will soon mean that the EU can track visitors in and out of their 27-strong block. If that does not work, perhaps migrants could have part of their salaries withheld during their stay in Europe, for collection only once they reach home.

In case that is not tough enough, there will be sticks and carrots for governments to make sure they take people back. Countries in the developing world that behave themselves will get preferential access to visas for their citizens, and some European money to help with border guards and fancier passports. In exchange, they would be required to sign agreements to re-admit any of their citizens who turn up illegally in the EU and even, in a big concession, to agree to take back “stateless” or unidentified migrants who have passed through their territory to reach Europe. If only a few African countries were to sign up to deals like this, there could be a big rise in deportations from Europe.

The circularity motion

Indeed, is this the secret purpose of the whole project? It seems reasonable to ask the question. After all, most rich EU members have yet to open their labour markets fully to workers from ex-communist countries that have recently joined their club. If Polish plumbers give Europe's voters the vapours, what chance do Malian migrants have of getting a warm welcome?

Ask national advisers about circular migration and some share the cynical view that it is a “small carrot” to secure those valuable re-admission agreements. Visa policy is an exercise in risk analysis, says one: some countries produce more illegal immigrants than others, some are more helpful about taking them back when detected. If the EU negotiates as a block it may find it easier to prod more countries into the helpful camp.

And yet it is too sweeping to condemn the plan as illiberal. Public opinion is in a distinctly toxic mood towards foreigners (a recent Eurobarometer poll found that only four out of ten EU citizens feel that immigrants “contribute a lot” to their country). Even talking about a continued need for substantial labour immigration is quite a brave act in today's climate.

Gregory Maniatis, an adviser on migration to the German presidency of the EU, argues that terms like circular migration are “very useful”, precisely because rival factions think it is their big idea, and will give them what they want. In other words, the contradictions now on display may just facilitate a much-needed debate on the case for immigration. Get that right, and today's muddle might one day make more sense.

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House prices

Fighting over their castles

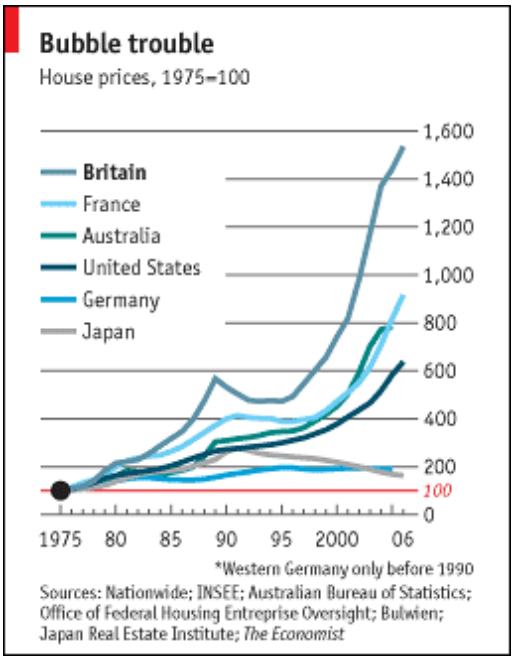
May 31st 2007
From The Economist print edition

How a long boom in house prices has altered Britain

Get article background

OF ALL the forces that have changed Britain over the past decade or so, the long bull market in housing is perhaps the strongest—and the most anonymous. High house prices have done their work quietly, reshaping concentrations of wealth and stoking clashes over supply. Other rich countries have had house-price booms too, but Britain's has been faster and more furious (see chart). And high levels of home ownership (Britons are more likely to own bricks than even Americans but less likely to own equities) have magnified their effect.

As problems go, the fact that the proportion of properties fetching £1m ($2m) or more in 1996 prices has increased more than tenfold since then (according to Nationwide, a mortgage provider) seems a nice one to have. For a decade, buying a house has been a one-way bet, which is one reason why more people are anxious to make it. But this windfall largely represents transfers from young to old. Those who have houses may choose to help their children get one too—over 40% of first-time buyers now receive help from their parents, according to the Council of Mortgage Lenders. But children whose parents do not own homes will be left behind.



For people who worry about inequality, this is bad news. Income inequality on one common measure, the Gini coefficient, has remained broadly constant for a decade. Meanwhile, inequality measured by asset ownership has risen. That is partly because assets other than houses have risen in value too. But hot house prices have a lot to do with it. John Hills of the London School of Economics (LSE) says that between 1945, when old wealth began to decline rapidly, and the 1970s asset inequality declined. In the 1980s income inequality rose sharply, but asset inequality stayed flat. Since the mid-1990s, asset inequality has increased markedly.

High property prices have also intensified conflicts over supply. MPs frequently receive complaints from constituents about new housing developments in their neighbourhoods. (Britons seem to excel at this form of grumbling: parties set up by British expatriates in Spain to block developments prospered in elections there on May 27th.) These are now balanced by complaints from parents who worry about their children staying at home indefinitely, stretching adolescence into a fourth decade. Since 2000 the number of loans made to first-time buyers has declined to levels last seen in the early 1990s, when interest rates touched 15% and many people could not afford to borrow.

Below the bottom rung of the private housing ladder, a different sort of conflict has arisen. One side-effect of high prices has been to increase demand for the social housing that is home to about 4m households. Unfair allocation of subsidised housing has become a favourite theme for the right-wing British National Party (BNP). Last year its candidates prospered in local elections by whispering that Nigerian immigrants were being favoured. Similar stories abound in areas that have seen lots of immigrants arrive from eastern Europe. Last month Margaret Hodge, a Labour minister, suggested that indigenous folk should have first refusal.

These problems are likely to get worse as the housing supply, which has only crept up while prices have been rocketing, comes under pressure from a bulge in demand. This stems from two trends. The first is a rising population, thanks to increased longevity and higher net immigration (up from 50,000-60,000 a year in the mid-1990s to an annual average of 185,000 in the three years to 2005). The second is that more people are living alone. As a result, the number of households in England will increase from 21.1m in 2004 to 26m by 2026, according to official projections.

Immigration has a delayed effect on the housing market, because many newcomers start off in housing that most British-born folk would find unacceptable. In Boston, a market town in Lincolnshire, housing inspectors are used to finding handprints on the ceilings of private rented accommodation, signs that bunk-beds have been crammed in, then whisked away before they arrive. But many of these immigrants will settle down and make homes. A report published on May 29th by the Joseph Rowntree Foundation, a charity, found that half of new migrants from eastern Europe intended to stay. They will need somewhere decent to live.

The capital, circa 1860

To see how these conflicts are playing out, take a look at London. The city's population has been rising steadily, and yet parts of its centre are becoming less densely populated. Westminster, and Kensington and Chelsea, two expensive boroughs, are the most popular places to own second homes, according to council-tax returns. Add to that the fact that London attracts wealthy foreigners who are willing to pay several million pounds for a home to live in part-time, and the result is a city whose most desirable parts are emptying.

Yet away from London's expensive centre, things are getting more cramped. Election-registration officials in east London, a favoured destination for new arrivals, report finding 15 registered voters living at a single terraced house with a couple of bedrooms. Tony Travers, a London-watcher at the LSE, reckons that the large new garden sheds visible on Google Earth in some of these neighbourhoods are housing people too. In 19th-century London the squeeze on housing was solved by having those at the bottom of the pile sleep in shifts, or “hot-bed”, thereby cramming several families into a space meant for one. Parts of the city seem headed back there now.

A political head of steam is building behind the idea of fixing things by building more homes. Gordon Brown, the prime-minister-to-be, has argued for this recently. It will be hard to sell to the 70% of households who already own their homes, however, and especially hard for the Conservative Party, which is strong in the south-east where people think their neighbours are too close now. Yet Michael Gove, the shadow housing minister, believes his party will accept a bonfire of planning restrictions when it is convinced that there is a good, economically liberal case for it. “The longer it goes on unchanged, the worse it gets,” says Mr Gove. Which seems a melancholy verdict on what has looked for a decade like the closest thing yet seen to a mass lottery win.

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Iraq kidnappings

Snatched

May 31st 2007
From The Economist print edition

The abduction of five Britons shows nowhere is safe in Baghdad

Get article background

IT WAS an audacious attack even by the lawless standards of Baghdad. Gunmen in Iraqi police uniform arrived at the finance ministry on May 29th in a fleet of official-looking vehicles, blocked the road, asked “where are the foreigners?” and abducted a British management consultant along with four British armed bodyguards.

In Baghdad's bewildering violence, it is hard to know what lies behind the attack. It could be money, revenge, personal resentment, the desire for insurance against future confrontation with American-led coalition forces, macabre political theatre, or something different. But the scale and method suggest a political motive.

AFP

Guarding the stable door

While Iraqis live with the daily threat of abduction—even from government offices—kidnapping foreigners with armed bodyguards has hitherto been rare. The use of police uniforms is the speciality of Shia militias, particularly the Mahdi Army led by the firebrand preacher, Muqtada al-Sadr. If they are involved this time (though an aide to Mr al-Sadr denies it), the Britons are more likely to live. Being kidnapped by Sunni insurgents is usually a death sentence—with luck by shooting, but often through torture and gruesome beheading.

In Basra, local members of the Mahdi Army were quick to claim the kidnapping as retaliation for the killing of one of their local commanders, known as Abu Qadir, in a joint British-Iraqi operation in the southern city four days earlier. British security sources are sceptical. They say the Mahdi Army might not have had time since then to stage such a well-orchestrated attack, or information to identify the foreigners as Britons—not least because the consultant was working for an American firm, BearingPoint, and his protection was provided by a Canadian company, GardaWorld. But some Mahdi Army factions may be targeting foreigners in general in response to the arrest and killing of several of their chieftains by American forces in the course of the four-month-old “surge” of soldiers into Baghdad.

American commanders have until now regarded Mr Sadr as “reconcilable”, saying he has usually acquiesced in their attempt to pacify the city. As a result, they have tried to target only Mahdi army figures who are deemed to be beyond his control. But Shia factional politics are murky at the best of times. On May 25th Mr Sadr returned to the limelight after a long absence (he had reportedly slipped to safety in Iran) with a speech calling for the eviction of foreign forces and unity with Sunnis.

Plainly, the American “surge” has yet to improve security in Baghdad significantly. Whether it will do so by September—when General David Petraeus, the American commander in Iraq, promises to report back to Congress—is open to doubt. A further concern for the Bush administration is whether the abductions, and the repeated deaths of British soldiers, will prompt the incoming prime minister, Gordon Brown, to rethink Britain's presence there.

For now, the British embassy has banned staff from visiting government offices that lie outside Baghdad's protected “Green Zone”. Private security firms, whose 20,000-odd members make up the second-largest foreign “army” in Iraq, will no doubt become more wary of police uniforms. “It'll be difficult, because nobody wants a shoot-out with the real police,” says Lieutenant-Colonel Tim Spicer, head of Aegis, a leading British security firm. But the fees offered to consultants and private soldiers will still draw the ambitious, adventurous and foolhardy to Iraq.

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Stalking

Boys in blue and men in white coats

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From The Economist print edition

A new way to tackle extremists?

ONLY one British prime minister has ever been assassinated. That unfortunate honour went to Spencer Perceval, a Tory who was shot dead by a madman as he walked through the House of Commons lobby in 1812. Monarchs have led equally charmed lives: those who have met violent ends have tended to do so on battlefields or chopping blocks. Queen Elizabeth II once found a barefooted eccentric in her bedroom, but he only wanted a cigarette. Britain is a relatively safe place in which to be famous.

It is now a bit safer still. On May 27th it emerged that the police had for eight months been running a VIP-protection unit in conjunction with the Home Office and Department of Health. Buried in the fine print of a government document, the *Mail on Sunday* spotted the “Fixated Threat Assessment Centre” (FTAC), led nationwide by London's Metropolitan Police. Its role is to protect public figures from “fixated individuals”, commonly known as stalkers. Clues on government websites suggest that the centre's staff includes four police officers, two civilian researchers, a forensic psychiatrist and a forensic psychologist. More Googling throws up the identities of the latter two, who were unwilling this week to talk about their work.

The doctors, both of whom are based in London hospitals, have the power of “sectioning”, or forcibly detaining in a mental hospital those who they deem to pose a threat to themselves or others. That they should now be working alongside the police worries human-rights fans, who fear that their powers may be abused to lock up awkward characters without the inconvenience of a trial. Suspected terrorists, on whom the government already imposes restrictive “control orders” when it lacks sufficient evidence for a conviction, may end up being targeted, they say.

The police counter that it is common sense to bring in experts from the health world, whose insights may help to prevent tragedies. Pooling information between agencies is a strategy that has helped to tackle all sorts of other crimes in the past. And it is right that those with mental problems should be channelled into the health system, not prison. Yet suspicions linger. The Met defines its stalking targets as those who are “abnormally preoccupied with certain ideas or people”. The inclusion of “ideas” gives it wide remit. Could those abnormally pre-occupied with the idea of *jihad*—or, indeed, human rights—be considered fixated individuals?

The secrecy surrounding the FTAC does not help. The unit has been in business for eight months without any official announcement, and it is still something of an enigma. No one will say how many people (if any) it has begun legal proceedings against, or how many have been sectioned. The Home Office explains that this is because it is a pilot scheme; the Department of Health frets about the confidentiality of the “patients”. Details requested under the Freedom of Information Act are unlikely to appear for some time. Yet after all, as the government frequently tells those who object to CCTV and ID cards, if you are doing nothing wrong, you have nothing to hide.

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Road safety

A spy on every street

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From The Economist print edition

Speed cameras get smarter

JEREMY BENTHAM'S Panopticon was a theoretical prison that allowed wardens to observe any inmate at any time, without his being aware of when it was actually happening. The resulting sense of “invisible omniscience” would, he hoped, encourage good behaviour.

The Panopticon was never built, but the idea has endured. Bentham's latest disciple is the Cumbria Safety Camera Partnership, the organisation responsible for speed cameras in that corner of north-west England. From June, it will deploy mobile cameras across the county alongside its existing network of fixed ones—but, crucially, it will deploy them in frequently changing, randomly chosen places. The aim, it says, is to make motorists unsure of where exactly the cameras are, forcing them to drive more cautiously. Camera-deployers in other parts of the country are watching with interest.

The experiment brings a welcome dose of sanity to Britain's strange speed camera laws. Until April Britain's policies on speed cameras had been hedged with restrictions. Timidity in the face of a noisy road lobby meant that cameras had to be sited only on roads that had seen several fatal accidents. Although that made the most dangerous roads safer (the Department for Transport reckons that cameras reduce accidents by up to 24%), it did little to stem the trickle of deaths and serious injuries on the rest of the network. Local drivers quickly learn where the cameras are; helpful signs are provided for everyone else. The cameras themselves are big, brightly coloured and work only over short distances. So speeding drivers jam on the brakes to dodge them before accelerating off.

The Cumbrian announcement is part of a broader trend towards cleverer cameras. Several roads are now watched by pairs of cameras that monitor average speed over many miles, making them harder to fool. High-tech digital cameras are being tested in parts of London. They are smaller than conventional models, do not betray their presence with a flash and cannot run out of film.

Petrolheads (the most extreme of whom have taken to vandalising cameras with paint, fire and even air rifles) have reacted with predictable dismay. Sheila Rainger of the RAC Foundation, a motorists' lobby group, warns that cameras can do only so much: “Cameras detect speeding, but they can't detect bad drivers.” And she points out that traffic policing by humans has fallen as cameras have proliferated.

Still, the reformers have good evidence. The Cumbrian plan is inspired by Australian states such as Queensland, which has had a random-placement system since 1987. Casualty numbers fell by up to 35% when the new approach was introduced. The World Health Organisation notes approvingly that the “random and covert” nature of the Australian system makes it more effective than a scheme such as Britain's. Mr Bentham's Panopticon may yet be built.

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The science of education

Experimental subjects

May 31st 2007 | CAMBRIDGE
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Neuroscience can transform education—if scientists talk to teachers

AT CAMBRIDGE UNIVERSITY'S Centre for Neuroscience in Education, the busiest time of day is after school. That is when children, some as young as four or five, come in to sit in an electromagnetically shielded booth and perform tasks such as making simple decisions on a games console, or watching silent cartoons and listening on headphones to apparently random sounds.

All the while, the tiny fluctuations in brain waves sparked by these stimuli are being recorded through a net of electromagnetic sensors placed on the child's head. (“No more invasive than placing a finger on a cheek to feel a muscle twitching,” the centre's director, Usha Goswami, is quick to reassure parents.) Later, the data are analysed to find out what was happening inside the children's brains.

Until recently, Britain lagged behind in the use of brain imaging to study learning. The British Educational Research Association is launching a special-interest group on the topic this autumn; by contrast, its American counterpart has had one for a couple of decades. Money for such research is scarce in Britain; in America, Germany and Japan it is financed by the government. Nonetheless, the Cambridge centre is one of three that have been set up in Britain in the past couple of years.

Much of the research concerns learning deficits, such as dyslexia and its numerical analogue, dyscalculia. If the roots of such conditions were understood, it might be possible to prevent them from becoming a problem. “The great promise of cognitive neuroscience,” says Ms Goswami, “is that we could intervene early to change the trajectory of a child's development.”

Researchers hope that a better understanding of the way the brain works will improve education for all children, not only those with educational problems. But it will be some time before this grand vision becomes reality, and in the meantime practice is pulling worryingly ahead of theory. In May the Economic and Social Research Council (ESRC), a funding body, published a report on neuroscience and education. It called for more dialogue between scientists and teachers to counter the “neuromyths” that hold sway in many of Britain's classrooms.

One such myth is the notion that there are “critical periods” outside which certain subjects cannot be learned—witness the oft-claimed impossibility of mastering a second language unless a start is made in early childhood. It is more accurate to talk of “sensitive periods” when learning comes most naturally. Another oversimplification is pigeon-holing children as “visual”, “auditory” or “kinaesthetic” learners. Some teachers are so keen that they give each child a “V”, “A” or “K” badge to prompt adults to communicate accordingly. In reality, we all use each style, and which is most appropriate depends on what is being learnt as well as personality.

According to John Geake, a former teacher who is now a cognitive neuroscientist, a shake-up in educational research is long overdue. As an academic discipline, he says, education has been heavily influenced by post-modernism—the school of philosophy in which all meaning is regarded as subjective and all truth as relative. “And frankly,” he says, “science negates post-modernism.”

Paul Howard-Jones, the author of the ESRC report, says that many policymakers too long for a “new broom” in educational research. “They see brain imaging as a road to a new science of learning,” he explains, “with the emphasis on ‘science'.” He counsels caution, though, because “brain scans cannot lead directly to lesson plans” and collaboration between teachers and scientists will be hard to manage, requiring flexibility on both sides.

But there is no doubt that these new techniques offer great promise for education. Back in Cambridge, Ms Goswami talks about her lab's recent research on dyslexia. It seems that dyslexics may have particular difficulty in processing rhythmic patterns in speech. So clapping and singing nursery rhymes with babies and toddlers may not only be what many parents do naturally but might also protect children against the

effects of dyslexia further down the road—a hypothesis it is hard to imagine having developed without the insights that came from peering directly into children's brains.

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Effective learning

Making minds

May 31st 2007 | WHITLEY BAY, TYNESIDE
From The Economist print edition

A school that hopes to influence the way all students learn

Get article background

HOUSED in grotty 1970s buildings with leaking flat roofs, Monkseaton Community High School, a comprehensive in Whitley Bay, near Newcastle, does not look like a plausible birthplace for an educational revolution. Not only is it on course, though, to become one of Britain's first “trust schools”—a new type of independent state school brought in by the government's 2006 education reforms—but it also hopes to improve education everywhere by carrying out experiments inspired by brain research.

By September, if a public consultation starting on June 4th is favourable, the school expects to be run by the Innovation Trust, a charity it is setting up with Microsoft, Tribal Education (a consultancy), David Reynolds (an education researcher) and the local council. The Open University will be offering advice.

The school has already made a start. Recently it did some research on the effective formation of memories. Early results suggest that, for pupils to learn certain sorts of information, brief repetition interspersed with complete breaks works well. So teachers delivered carefully scripted lessons lasting just eight minutes three times in succession. Some students played “Simon Says” or “Chinese Whispers” in ten-minute breaks to make sure they didn't unintentionally think about what they had just heard; others listened to more about the same topic. A third group was taught for an hour along standard lines. Tested on what they could remember two weeks later, students in the first group did as well as the others, despite studying the material for less than half as long.

Delivering education more efficiently is a big theme for Paul Kelley, Monkseaton's head teacher. Students could use the extra time to work on languages or sciences—or indeed an art or sport or cookery; currently, schoolwork takes up so much time that it is difficult to practise enough to excel at other things.

Speeding up education could also enable some students to start their working lives earlier, which would alleviate the coming demographic crunch in the workplace. So the trust will expand a scheme already running at Monkseaton, where students can take Open University degree-course modules alongside GCSEs or work towards a foundation degree while they prepare for A-levels.

Or the extra time could be spent just sleeping. Mr Kelley cites work by researchers in Munich, who analysed sleep data from 25,000 Europeans on days when they could sleep as late as they wanted. Sleeping hours became steadily later throughout the teens, then began to drift earlier again from the age of 20. Because the pattern held in rural regions without nightclubs, and changes in women's sleeping hours were correlated with the menopause, hormones seemed a more likely cause for the shift than partying. The trust will be monitoring students' alertness through the day, and may be able to let them come in later and still go home in time for tea.

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Football

Spoils to the victors

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New owners, more revenues—and a change in the Euroworks?

ONE could hardly think of an unlikelier trophy for a billionaire businessman than Newcastle United Football Club, which has won no significant competition for decades. But stranger things have been happening in English football than the £133m bid for the club announced on May 24th by Mike Ashley, a sportswear mogul.

A slew of other prominent businessmen are also queuing up to buy football clubs. Thaksin Shinawatra, a deposed Thai prime minister, has made an indicative bid for Manchester City, and Southampton has recently received an offer from Paul Allen, one of the founders of Microsoft.

Why the continuing love affair with English clubs? Figures released on May 31st by Deloitte, an accounting firm, provide one answer: the revenues of Premier League clubs are likely to be almost £1.8 billion in the coming season, up from about £1.4 billion in the one just finished. In the past, such jumps in income have gone mostly to players, with little, if any, left over for club owners.

And for good reason: the market for talent in football is remarkably efficient. On the whole, those clubs that pay the most to players tend to win more games. And to the victors go the spoils. Teams that rank higher in the various leagues earn far more through marketing deals than those that they have beaten.

But two changes seem to be taking place in English football, says Dan Jones, who heads the sports group at Deloitte. The first is that English clubs have done a better job of marketing themselves and securing good broadcast deals than rivals elsewhere. In the next season Premier League clubs are likely to earn nearly £700m more than those in the next most lucrative European league, Italy's Serie A. The top English teams can now afford to pay so much for talent that, barring a very few rich clubs elsewhere such as Barcelona or Real Madrid, they are competing mostly with each other.

The second change is an influx of new owners such as Malcolm Glazer, an American who paid £790m to take over Manchester United in 2005. They are replacing an old guard who ran clubs for love and glory. Many of the newcomers have big debts, forcing them to focus on profit.

Such thinking has sports bureaucrats worried. A report on European football for the European Commission last year fretted that “football should not be a contest between corporate leviathans with the outcome dictated by whoever has the deepest pockets”. It urged cost controls such as a payroll tax on rich clubs to finance poorer ones. The aim is to retain a “competitive balance” so that fans do not lose interest in the game, thinking that their club has no shot at victory.

Stefan Szymanski, who teaches economics at Imperial College London, reckons one outcome of a proposal the European Commission is debating now could be the adoption of an American sports model that forces teams to share revenue and lets the worst of them pick some of the best new talent. That would make owning lower-ranking clubs more profitable. Perhaps Mr Ashley's purchase is not so odd after all.

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Electric cars

Charging around the city

May 31st 2007
From The Economist print edition

How green and safe are they?

SANDWICHED between a large BMW and an even larger Mercedes in the heart of London's theatre district is a parking meter glowing with a surreal blue light. The yellow-painted bay next to it is one of the first in London for recharging electric cars. Its futuristic look is intentional.

Electric cars are the fastest-growing form of transport in Britain's crowded capital. In June 2003 just 49 electric cars slid silently around its streets. A survey in March 2005 found 1,278, and they may have doubled since then. Altogether, London has some 14,000 alternatively fuelled cars, up from 1,800 in 2003.

The most ubiquitous is the tiny plastic G-Wiz, designed in California and built in Bangalore. Economics accounts for most of its growing charm. With a starting price of about £7,000—the hybrid Toyota Prius costs nearly £18,000—it allows Britain's middle classes to make an affordable statement on climate change. Such cars are exempt from London's congestion charge as well as national road taxes. Westminster—Britain's sootiest borough—offers free parking and recharging too.

Whether electric cars help solve the problems of pollution or global warming is a moot point. London's dirtiest vehicles are diesel-powered lorries and buses; removing a few passenger cars will do little for air quality. Exempting them from the congestion charge seems odd: they still take up space on the roads, and Britain's eye-watering petrol taxes give a strong boost to greener cars already.

But they caught the green imagination, and now the G-Wiz, at any rate, may be in trouble. Electric cars have been humming around the roads lightly regulated as quadricycles. When the transport department put one of them through a crash test earlier this year, test dummies were severely injured at impact speeds as low as 35 miles an hour. Importers argue that the tests are absurd for small light cars designed to travel slowly in cities. Nevertheless Stephen Ladyman, the roads minister, wants more tests and tighter regulations.

The market may bring a speedier response. Makers of the rival French-made Mega City electric car point out that their cars are routinely and successfully crash-tested. That has not gone unnoticed by some of the mums on a G-Wiz owners' website. “I bought mine to do the school run,” writes one. “Should I be driving my children in it?”

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Global warming

Struggling to save the planet

May 31st 2007
From The Economist print edition

Reuters

A new American proposal on combating climate change will not defuse the row over the issue in the run-up to the G8 summit

Get article background

AT MOST summits of the Group of Eight, a club where the leading industrialised democracies, plus Russia, mull over global issues ranging from proliferation to money-laundering, the hosts go to great lengths to insulate the delegates from rowdy protests. Next week's pow-wow, which takes place in the serene 18th-century resort of Heiligendamm on Germany's Baltic coast, is no exception. The government tried to exclude protesters from a zone that extended as far as 10km (six miles) from the elegant classical palace where the grandees will assemble; a court later reduced the cordon to 200 metres from the perimeter fence. But this year, the biggest commotion may occur inside the venue, as leaders debate a common response to climate change.

The preparations for the summit, at any rate, have been unusually contentious. Angela Merkel, Germany's chancellor, wants the G8 countries to agree that the increase in the world's average temperature due to global warming should not be allowed to exceed 2°C. To that end, she wants them to pledge to cut their 1990 levels of greenhouse-gas emissions by half by 2050. These steps, she hopes, will pave the way for negotiations on a new global pact on climate change; talks could get under way as soon as December. Mrs Merkel has told the German parliament that she is not sure a deal can be reached. She is planning to have lunch with George Bush on June 6th, the opening day of the summit, in the hopes of breaking the deadlock.

America is not happy with the notion that it shirks its responsibilities to the planet, but nor does it want to sign up to tough emissions targets. In particular, it objects to rules like those of the Kyoto protocol, the United Nations' treaty on climate change, which restricts emissions from rich countries while allowing those of poor countries to grow unfettered. That would put American firms at an unfair disadvantage to Chinese and Indian ones, the Bush administration says, and would prompt the most polluting industries to move to poor countries. Unlike all other rich countries bar Australia, the United States never ratified the Kyoto protocol, and formally withdrew from it in 2001.

As *The Economist* went to press, Mr Bush was expected to announce a new initiative designed to reconcile those concerns. The American plan involves negotiations between the world's big emitters, including developing countries such as China and India which were not required to cut their emissions under the Kyoto protocol. The aim of the talks would be to set targets by 2008—which, given America's previous hostility to targets of any sort, looks like a concession to the Europeans.

The new American initiative seems an admission that its previous

strategy has failed. At a conference in Laos in 2005 it recruited Australia, China, India, Japan and South Korea to an outfit with that approach, called the Asia-Pacific Partnership on Clean Development and Climate. Canada's conservative government toyed with joining the partnership and announced that it would not be able to reduce emissions by as much as it promised at Kyoto. But it recently pledged instead to reduce emissions by a more modest amount by 2020, and says it has no objections to Mrs Merkel's 50% target by 2050.

Reuters

Not everybody's favourite club

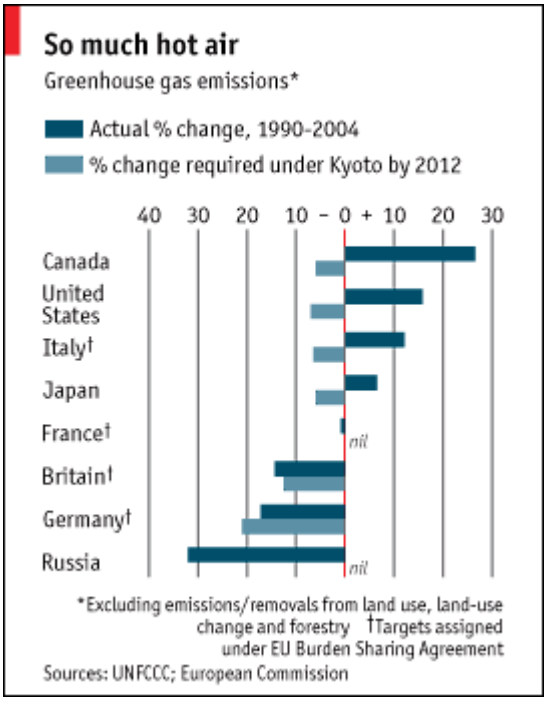
Australia's government, too, seems to be wavering in its opposition to mandatory emissions caps. The opposition, which is ahead in the opinion polls, has promised to sign the Kyoto protocol. In response, the government created a commission to come up with a new approach on climate change; it handed over its conclusions this week. The prime minister is now expected to unveil a more exacting policy based on these recommendations before calling an election later this year.

Indeed, world leaders seem to be competing with one another to churn out ever more ambitious targets on global warming. Shinzo Abe, Japan's prime minister, has decided to make climate change one of the centrepieces of his tenure. He too has produced a plan for a 50% cut in global emissions by 2050. Tony Blair, Britain's outgoing prime minister, has an even more ambitious reduction in mind, of 60%. The European Union as a whole has agreed to reduce its emissions by 20% by 2020, and offered to increase the figure to 30% if non-European countries make commitments of their own. Norway, meanwhile, hopes to become the world's first “carbon neutral” country, by reducing its emissions to zero by 2050, or paying for equivalent reductions elsewhere.

All this leaves America with few allies at the G8. Nicolas Sarkozy, France's new president, has urged the Americans not to obstruct attempts to tackle climate change. Even Russia is likely to support Mrs Merkel's stance, since its emissions have fallen dramatically since 1990, thanks to the industrial collapse that accompanied the break-up of the Soviet Union. It also stands to benefit from the trade in credits for emissions reductions allowed under Kyoto.

Nonetheless, America is likely to stick to its guns. After all, Mr Bush resisted similar pressure from his friend Mr Blair ahead of the G8 summit in 2005, which also addressed global warming but resulted in only an anodyne statement. Most European governments assume that little progress will be made until a new American administration takes office in 2009.

In the meantime, global emissions continue to grow. Indeed, the growth appears to be accelerating. A study recently published by America's National Academy of Sciences found that worldwide emissions, which had been growing by 1.1% a year in the 1990s, grew by more than 3% a year between 2000 and 2004. That is faster than the most pessimistic projections of the UN's Intergovernmental Panel on Climate Change, a body set up to make authoritative pronouncements on the science of global warming. It is also faster than economic growth, implying that the world is not just consuming more energy, but also making it ever more dirtily.



Even the G8 members that are enthusiastically embracing ambitious targets are struggling to cut their emissions. Only Britain and Russia are now on target to meet their obligations under Kyoto (see chart). Meanwhile, emissions from India and China have almost doubled since 1990. No wonder the row over the G8's summit communiqué is getting hotter and hotter.

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An index of pacifism

Give peace a rating

May 31st 2007
From The Economist print edition

You can measure it, but can you understand it?

WHETHER as an entrepreneur or as a philanthropist, Steve Killelea thinks the simplest maxims work best. And in business, a few basic ideas have served him well: from a headquarters in Sydney he has created a firm, Integrated Research, that supplies systems management for credit cards, stock exchanges and cash dispensers across the world. And as one of Australia's biggest (and most discreet) donors of aid to poor countries, he also likes to keep things simple: his mission is to help the "poorest of the poor" in practical ways.

Getting their measure
Global peace index

TOP 5		BOTTOM 5	
Country	Score	Country	Score
Norway	1.357	Iraq	3.437
New Zealand	1.363	Sudan	3.182
Denmark	1.377	Israel	3.033
Ireland	1.396	Russia	2.903
Japan	1.413	Nigeria	2.898

Source: Economist Intelligence Unit

But uncomplicated maxims are not necessarily uncontroversial. Having overlaid the Irish Catholicism of his childhood with a dose of Tibetan Buddhism, he warms to the pacifist strain in the Asian creed. One of his favourite Buddhist sayings is that "your enemy is your best teacher". More contentiously, the bottom-line-minded businessman and the pacifist in Mr Killelea come together in a conviction that peacefulness, like anything important, can and must be calibrated. "What you can't measure, you can't understand," he says.

That, roughly, is the chain of thought which prompted him to order up a new way of assessing countries' general condition: along with GDP, trade balance and so on, it will now be possible to check out a country's ranking by "peacefulness". The methodology for the "global peace index" was devised by the Economist Intelligence Unit, our sister company.

The index takes note of internal factors—crime rates, prison population, trust between citizens—and external ones, like relations with neighbours, arms sales, foreign troop deployments. Norway's top place reflects its calm domestic atmosphere and good relations with nearby states. In the case of Israel (119th), high military spending, a huge army and unresolved local conflicts are deemed to outweigh its low level of ordinary crime. Canada comes eighth; its American neighbour a dismal 96th, strangely just above Iran.

The index will run into some flak. A country that applied the simple Roman maxim—"if you want peace, prepare for war"—would score badly. By unconditionally endorsing low military budgets and marking down high ones, the index may seem to give heart to freeloaders: countries that enjoy peace precisely because others (often America) care for their defence. Indeed, one of the ideas behind NATO and several other security pacts is that America's protection limits the need for medium-sized powers to be big military players in their own right.

Still, perhaps the main thing about the index is not where countries are now, but how they change over time: if a country is getting more peaceful, presumably that is good—and if it is becoming less so, that could be a warning. Which way a nation is going may matter more than its ranking. But remember, some Buddhists say change is an illusion, no less than fixity: "By stating that there is neither motion nor rest, we follow the path of the middle."

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Cleaning up

May 31st 2007
From The Economist print edition

Alamy

Business is getting down to cutting carbon, but needs more incentives to make much difference to climate change, argues Emma Duncan (interviewed here)

Get article background

WHEN the notion of global warming first seeped into public consciousness in the 1980s, business took a dim view of it. Admitting that human activity was changing the climate would involve accepting some responsibility, which was likely to mean coughing up cash. So, in 1989, shortly after the establishment of the Intergovernmental Panel on Climate Change, the body set up under UN auspices to establish a scientific consensus on the issue, the big carbon emitters set up the Global Climate Coalition (GCC). It cast doubt on the science and campaigned against greenhouse-gas reductions.

The GCC folded in 2002. Its line of argument enjoyed a final flowering last year, in a startlingly inane television commercial put out by the business-funded Competitive Enterprise Institute (CEI). It showed pictures of trees (breathing in carbon dioxide) and a happy little girl blowing dandelion seeds (breathing out carbon dioxide). The punchline was: “Carbon dioxide: they call it pollution; we call it life.”

These days very few serious businessmen will say publicly either that climate change is not happening or that it is not worth tackling. Even Exxon Mobil, bête noire of the climate-change activists, has now withdrawn funding from the CEI and appears to accept the need for controls on carbon emissions.

Businesses in every sector boast about their greenness. Annual reports elaborate on investments to offset companies' emissions. Of course the companies that do this tend to be those with few emissions, such as banks and retailers. Some oil companies do it too, but they offset only the greenhouse gases that they emit in producing petrol, not the emissions from the petrol itself. Power generators, which emit CO_2 on a huge scale, do not do it.

Yet the corporate world's sudden conversion to greenery is not just fluff. Big emitters are beginning to price carbon into their investment plans, and to alter them accordingly. As a result, wind and solar energy are getting an enormous boost, the price of electricity produced from renewable sources is dropping fast and a flurry of projects to sequester carbon emissions from power generation is beginning to get under way. On the transport side, money is flowing into biofuels and electric cars.

Energy has become the hot new area for venture capitalists and universities. MIT's president, Susan Hockfield, has started an “energy initiative” to promote research into alternative sources, storage and cleaning up conventional sources; and student enrolment into energy-related courses has tripled over the past five years. In 2003, the most recent year for which figures are available, America's power-

generation industry spent less on R&D as a proportion of turnover than did the country's pet-food industry, which suggests there is scope for more investment.

What is driving this shift towards cleaner energy? First, moral pressure. Thanks to a potent combination of science, Hurricane Katrina, a heatwave in Europe, Al Gore's admonitions and starving polar bears, the fight against global warming has acquired the force of a religion enhanced by celebrity endorsement. Climate change has gone from being dull and marginal to cool and core. Businessmen, like everybody else, want to be seen to be doing the right thing, and self-interest points in the same direction. Firms that seem to be on the right side of the argument have a better chance of pulling in clever, idealistic young people to work for them.

Reuters

Al Gore, in the eye of the storm

Second, there is economic pressure. Governments increasingly accept the need to put a price on the damage carbon does, and make polluters pay that price. Fears about energy security mostly push in the same direction as those about climate change. Many governments are keen to reduce dependence on Middle Eastern and Russian oil and gas. That means encouraging energy efficiency and promoting domestic energy sources—which, aside from coal, tend to be the clean sort, such as solar, wind and biomass.

Europe already puts a price on carbon, through its Emissions-Trading System. The chances of a similar scheme being adopted in America rise with every passing hurricane. There is a plethora of subsidies on both sides of the Atlantic for clean-energy alternatives. Direct controls on emissions, for instance through vehicle fuel-efficiency standards, are being tightened around the world.

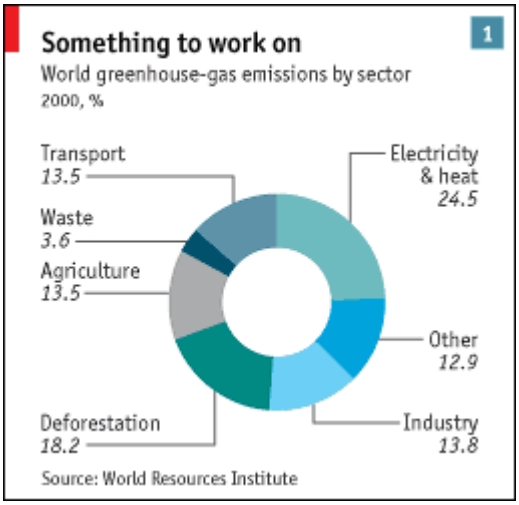
Yet emissions keep on rising. If greenhouse-gas concentrations are to be stabilised, then the carbon price or the support mechanisms for clean energy, or both, will have to rise or be adopted worldwide, or both. And if that happens, the returns on clean-energy investments will increase even further and the companies that have already invested in such businesses will have a head start over those that have not.

Moral and economic pressures have become intertwined, driving investors to push managers to go for cleaner investments. The Carbon Disclosure Project allows companies to report their emissions—and thus allows investors to see which companies don't. A group of investors, organised by Ceres and the Investor Network on Climate Risk, wielding $4 trillion and including powerful funds such as CalPERS, the Californian public employees' pension fund, and CalSTERS, the Californian teachers' pension fund, discriminates in favour of cleaner firms. The recent buy-out of TXU, Texas's main power-generator, led the company to abandon eight out of 11 planned coal-fired power stations because the private equity firm concerned, Texas Pacific, wanted to square the environmental movement.

Yet the shift towards greenery is also driven by more positive factors. For some huge firms, such as GE, Alstom and Siemens, a move towards clean energy spells opportunity. They sell power-generation equipment and aircraft and train engines. New regulations requiring companies to adopt cleaner processes will mean that capital equipment is replaced more quickly, to the benefit of such companies.

Even their customers increasingly realise that although climate change may push up their costs, it will also provide new opportunities—new markets, new technologies, new businesses and new money to be made. This could be disruptive. If carbon controls are tightened, the companies that will flourish are those

that have positioned themselves well. In power generation that means companies such as Exelon and Pacific Gas & Electric, which have invested heavily in nuclear or renewable energy, whereas coal-heavy ones such as AEP will suffer. In the petroleum business, the winners will include BP, with its enthusiasm for renewables, and the losers Exxon Mobil. In the automotive industry, producers of fuel-efficient cars, such as Toyota, are more likely to do well out of carbon constraints than companies such as BMW.



Technological change may also allow some parts of the energy and transport business to invade each other's turf. The power utilities hope to gain from the enthusiasm for plug-in electric cars, which could spell trouble for the oil companies. Biofuels, too, are a potential threat to them, not only because every farmer and forester may build a cellulosic ethanol plant in his backyard, but also because companies such as DuPont may prove better at making the fuels of the future. The power utilities, in turn, may suffer if fuel-cell technology turns cars into net producers, rather than consumers, of electricity. But these things will happen only if carbon constraints are tightened.

This survey will examine how climate change is affecting business, and how business can affect climate change. It will concentrate on industrial emissions rather than on agriculture and deforestation (which produce lots of carbon dioxide without involving business much) but will leave out air travel, on which this newspaper will publish a survey in two weeks' time. It will examine what is driving change in the sectors responsible for most emissions, the nature and extent of that change, and its likely impact. It will argue that business has changed nothing like enough to have a chance of averting global warming—but that, given the right incentives, it can. Whether that happens or not will be largely determined in America.

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Everybody's green now

May 31st 2007
From The Economist print edition

How America's big companies got environmentalism

Get article background

MEETINGS of the Edison Electric Institute, the trade association for the American power utilities, do not normally make waves. But the one that took place at Scottsdale, Arizona, on January 10th of this year was different.

AP

Power and positive thinking

Up until then, the EEI had been split between the companies arguing for carbon constraints—usually those, like Exelon, PG&E and Entergy, with more gas and nuclear energy than coal—and those arguing against—usually those, like TXU and Southern, with lots of coal. Since coal provides 50% of America's power, the coal utilities had mostly had the upper hand, and the organisation had advocated only voluntary restraint.

But this year the new chairman, Jim Rogers of Duke Energy, asked each of the 50 chief executives present what they thought the government should do about carbon. “It was pretty clear going round the table that the vast majority wanted to move on,” says Mr Rogers. Afterwards the EEI announced that it was calling for “regulation”. It balked at the word “mandatory”, but the implication hung in the air.

Power generation is the biggest source of CO_2 in America. America is the biggest source of CO_2 in the world. If America continues to refuse to control its carbon-dioxide emissions at the federal level, there is no chance that countries such as China and India, whose emissions will soon overtake America's, will control theirs. The EEI's turnaround was therefore significant.

Similar things have been going on in other industries. Companies that once pooh-poohed the idea of climate change have gone quiet; others have come out loudly in support of emissions controls. The shift culminated, in January this year, in the establishment of the United States Climate Action Partnership calling for “strong” federal action to combat climate change. The initiative was launched by ten blue-chip companies, along with four NGOs. Membership has now doubled, and includes GM, GE, BP, Alcan and Alcoa.

Attitudes in corporate America have changed in part because a federal system of controls has come to look like the lesser of two evils. America's states have already started to legislate to cut emissions. California is leading the charge. Last September it passed Assembly Bill 32, under which carbon emissions are to be cut to 1990 levels by 2020 and to 80% below 1990 levels by 2050. It will probably be implemented through a European-style cap-and-trade scheme. And California has adopted a low-carbon fuel standard that will require oil companies to cut the carbon content of their petrol. Other state governments have been watching California's initiative carefully and seem likely to follow its lead.

For companies, a diverse patchwork of state-wide systems is much harder to cope with than a single nationwide system. According to Ken Cohen, vice-president of public affairs at Exxon Mobil, “we need a uniform and predictable system. If the states are left to their own devices, we won't get that. It needs to be a federal system.” And since the Democrats took over Congress last November, the chances of America adopting federal controls have risen sharply. Bills are proliferating. Dan Kammen, of the Energy and Resources Group at the University of California at Berkeley, says he has never had so many calls along the lines of: “I'm Congressman X and I need to write a high-profile bill on climate change. What should it say?”

But in accepting the idea of federal regulation, companies are not just bowing to the inevitable. There is money in it, too. If the American government adopts a cap-and-trade system (see article), it will hand out permits to pollute. They are, in effect, cash. According to Paul Bledsoe of the National Commission on Energy Policy, those allowances are likely to be worth in the region of $40 billion. Companies therefore want to be involved in designing those regulations. As Mr Rogers explains: “There's a saying in Washington: if you're not at the table, you're on the menu.”

The process has become self-reinforcing. In order to be seen to be green, companies have to lobby for emissions controls. That increases the pressure for emissions controls, which in turn increases the need to be seen to be green.

The more that American businessmen examine the European system, the less alarming the prospect of carbon constraints begins to look. Not only has it resulted in a lot of cash being handed over, but it has also created a whole new business: the carbon market.

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Trading thin air

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From The Economist print edition

The carbon market is working, but not bringing forth as much innovation as had been hoped

Get article background

EVERY year the average sow and her piglets produce 9.2 tonnes of carbon-dioxide equivalent through the methane emissions from their effluent. In the past, that has been a problem both for the environment and for pig-farmers. In developing countries the pig-effluent collects in open lagoons which smell bad and get infested with flies. Sometimes it flows straight into nearby water systems.

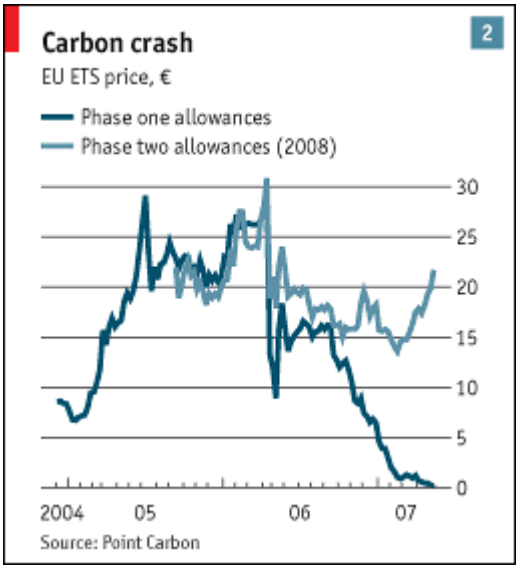
Now this problem has become an opportunity. Bunge, an agricultural-commodities business based in America, builds lined and enclosed pools to collect the effluent and captures the methane that it emits. The farmer can use the gas to generate electricity. By preventing methane from escaping into the atmosphere, Bunge creates a credit which it can sell on the carbon market. The farmer gets to keep 20-30% of the value. Bunge has 40 such projects operating in Brazil and is planning to expand into Mexico, Guatemala, Peru and the Philippines.

The carbon market is truly innovative. Although it works like any commodity market, what is being bought and sold does not exist. The trade is not actually in carbon, but in not-carbon: in certificates establishing that so many tonnes of carbon dioxide (or the equivalent in other greenhouse gases) have not been emitted by the seller and may therefore be emitted by the buyer.

The purpose of setting up the market was, first, to establish a price for carbon and, second, to encourage efficient emissions reductions by allowing companies which would find it expensive to cut emissions to buy credits more cheaply. It has had some success on both counts—some would argue too much on the second.

A carbon price now exists, established by the European Emissions-Trading Scheme (ETS). In its first phase it has been volatile (see chart 2) because information about Europe's industrial emissions was poor, so the market got a shock in early 2006 when it emerged that the European Commission had been too generous with the allowances it handed out to industry. Phase one allowances (2005-08) are now virtually worthless. But the commission has learnt its lesson and got meaner with allowances, thus pushing up the price in phase two.

The supply of carbon credits comes principally from two sources. The first is the allowances given to companies in the five dirty industries covered by the ETS (electricity, oil, metals, building materials and paper). The second source of carbon dioxide lies outside Europe. The European Commission linked the ETS to the "clean-development mechanism" (CDM) set up under the Kyoto protocol. This provides for emissions reductions in developing countries—such as those on the Latin American pig farms—to be certified by the UN. Such "certified emissions reductions" (CER) can then be sold.



The demand for carbon credits comes mostly from within the ETS, from polluters who need certificates allowing them to emit carbon. There is some demand from Japan, which has a voluntary scheme, and from companies and individuals elsewhere in the world who want to offset their emissions for moral reasons, or to make themselves look good.

The trade is now sizeable. Some €22.5 billion-worth ($30.4 billion) of allowances were traded last year, according to Point Carbon, a data-provider, representing 1.6 billion tonnes of CO_2—a huge increase on the €9.4 billion traded in 2005. Europe's ETS made up about

80% of the total value.

Developing-country CERs accounted for about €4 billion of last year's trade: 562m tonnes of CO_2. According to New Carbon Finance, a research company, carbon funds worth $11.8 billion have been raised so far. Half of that total is managed from London. Climate Change Capital, a niche investment bank, raised $130m for its first carbon fund, launched in July 2005; its second, launched a year later, is now worth around $1 billion. According to Tony White of Climate Change Capital, all the money for the first came from hedge funds, which like risk. By the time the second fund was established, more cautious investors, such as pension funds and banks, were prepared to put money into it.

The money has gone mostly into projects in developing countries to produce CERs. Bunge's Brazilian pig-farmers are making CERs out of their animals' effluent. But the bulk of the investment has gone into greenhouse-gas capture in China.

Cheap and cheerful

The most potent greenhouse gas is HFC-23, a by-product of HCFC-22, a chemical used in, among other things, fridges. It is now mostly banned in the developed world. Its global-warming effect is, tonne for tonne, 11,700 times greater than that of carbon dioxide, so it is good to get rid of it, and cheap, too; capturing it and burning it off costs less than €1 for the equivalent of one tonne of carbon dioxide. These days China produces most of the world's HFC-23. That—along with the fact that the Chinese government is efficient to deal with—explains why 53% of the total volume of CDM projects in 2006—worth around €3.5 billion in total—went to China.

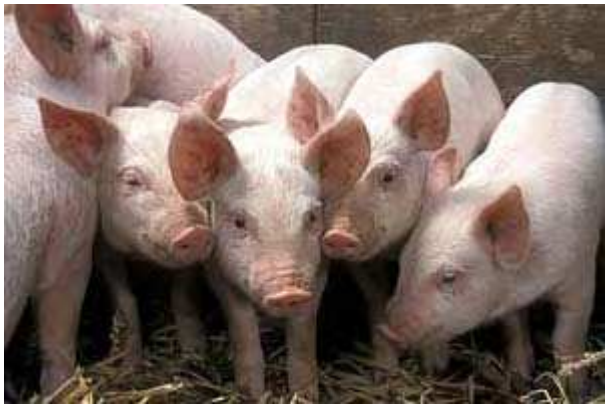
The very cheapness of cutting emissions of HFC-23 makes the trade controversial. Credits costing less than €1 to produce have been sold on the market for up to €11. Factories have found that their damaging by-product, HFC-23, can be more valuable than their main output. The Chinese government, realising how much money there is in this business, has imposed a tax of 65% on revenues from it, and in February this year it launched its own $2 billion CDM fund. So European consumers, who are paying for greenhouse-gas abatement through their electricity and other bills, are contributing billions of dollars to the Chinese government's coffers via the CDM.

Easy options—HFC-23 and other fabulously dirty (ie, profitable) industrial gases—will soon run out. Guy Turner at New Carbon Finance reckons that the days of the CER that costs less than €1 to produce are over, and that the range is now more like €1-5. But there is plenty of scope at that level. China's industrialisation is a fast and dirty business, and there will be no shortage of greenhouse gases produced there for rich-country money to clean up.

That is part of the problem. Of the 65% of companies surveyed by Point Carbon earlier this year which claimed that the ETS had led them to abate their emissions (up from 15% the previous year), most were planning to buy credits rather than cut their own emissions. Yet the ETS was intended to cut European emissions as well as Chinese ones.

This is happening on a small scale. At times the carbon price has made it worth power companies' while to switch from dirty fuels to cleaner gas. “We massively reduced our lignite production when the CO_2 price was at its height,” says Alfred Hoffmann, head of portfolio management in Scandinavia and Germany for Vattenfall, a Swedish power company. Lignite is dirtier than black coal. But then gas prices rose, making switching less attractive.

FLPA



Bringing home the methane

The carbon price has delivered some of the innovation that it was supposed to generate. Shell, for instance, is pumping CO_2 from a refinery in the Botlek area of the Netherlands into 500 greenhouses producing fruit and vegetables, thus avoiding emissions of 170,000 tonnes of CO_2 a year and saving the greenhouse owners from having to burn 95m cubic metres of gas to produce the CO_2 they need.

Alcan, an aluminium company, is planning to use the heat from one of its smelters to increase the efficiency of its power-generation plant at Lynemouth in Northumberland in Britain. Wyn Jones, managing director of Alcan's British smelting and power-generation operations, says this will save 150,000 tonnes of CO_2 a year (€3m if the price of CO_2 is around €20 a tonne, as Alcan expects) and 60,000 tonnes of coal (£2.1m, or $4.2m, at around £35 a tonne). He is not sure how much the project will cost, but is reckoning on a payback period of around five years.

But European emissions overall are not falling, which suggests there may not be as much switching out of coal, or as much technological innovation, as had been hoped. Chinese CERs are too cheap and the carbon price is too low and too volatile. Even when it was bouncing around at €15-25, it did not seem to encourage much new investment. According to Bjoern Urdal of Sustainable Asset Management, who took a detailed look at the effects of the carbon price on the German electricity market last year, replacing old coal-fired power stations with gas-fired ones became worthwhile only at a carbon price of €33. He has not done the sums since last November, when the European Commission chucked out Germany's "transfer rule" (which would have exempted new coal-fired stations from the ETS for 14 years), but reckons the break-even point will have come down to more like €25.

That helped raise the carbon price. So did the commission's decision to slash national governments' planned allocations to industry for the period 2008-12. The price of phase two allowances has risen to a level high enough to get some power generators to switch from coal to gas at the margin when the gas price is moderate; but not high enough to get them to replace coal-fired power stations with gas-fired ones—nor to encourage much of the innovation that carbon trading had been expected to spawn.

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Irrational incandescence

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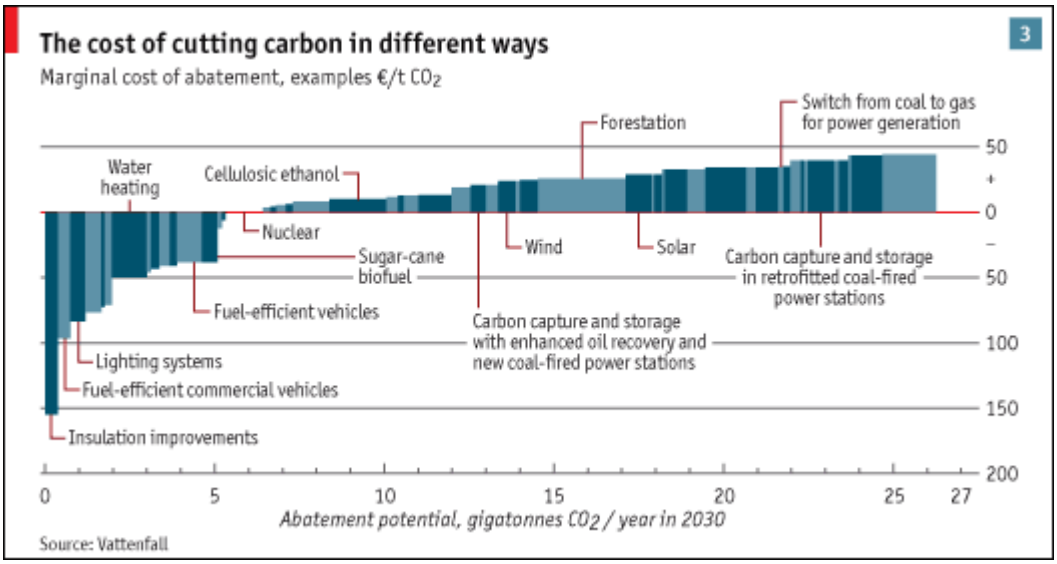
From The Economist print edition

People can't be bothered to make easy energy savings

Get article background

SOME ways of cutting carbon are cheaper than others. So, at different carbon prices, different sorts of methods of abatement become worthwhile. Vattenfall, a Swedish power utility, has tried to quantify which ones would be worth undertaking at what price (see chart 3).



The result is a testament to economic irrationality. The measures below the horizontal line have a negative abatement cost—in other words, by carrying them out, people and companies could both cut emissions and save money. At a macroeconomic level they would boost, rather than reduce, economic growth.

Lighting, for instance, accounts for some 19% of the world's electricity use. A standard incandescent light bulb costs around €1, says Theo van Deursen, chief executive of Philips Lighting, and uses €15-worth of electricity a year. A low-energy one costs €5-6 and uses €3-worth. The payback on investing in a compact fluorescent bulb, therefore, is less than a year. Yet low-energy lighting makes up only 30% of Philips's sales. Mr van Deursen admits to being disappointed. Sales are rising faster in the developing world: there, people pay more attention to electricity bills than they do in the rich world.

Economists trying to explain this apparent irrationality suggest that the savings are too small and the effort involved in change too large. People find their electricity bills too boring to think about; within companies, those responsible for keeping bills down may not have the authority to spend the necessary capital. Another explanation is the agency problem: that the developer who would have to pay higher capital costs up front will not be forking out for the electricity bills. Besides, people buy houses not because they have good insulation but because they have pretty views.

Compared with pursuing greater energy efficiency, the abatement measures into which so much money is now being poured look rather expensive. Carbon capture and storage and wind and solar power, for instance, all have positive, and relatively high, abatement costs.

But the cheapest sources of abatement are difficult for policymakers to get at. Billions of different actors are involved. They cannot be targeted in the way that a few hundred factories can. What is more, a moderate carbon price is not likely to be effective, since people clearly do not care enough about cost.

One policy option is to decouple the utilities' revenues from the amount of electricity they sell. That gives

them an incentive to increase the efficiency of power usage rather than to produce and sell extra power. California is already doing this, which is presumably why electricity prices there are among the highest in America, while consumption is relatively low.

Energy-efficiency standards, such as building regulations, are another option. Economists generally prefer to avoid rules that specify what companies can produce and how, because they require governments, rather than markets, to allocate resources, and markets tend to do a better job. But if, as in this case, a public as well as a private good is involved, and the market does not seem to be doing its job properly, there is an argument for governments giving it a nudge.

There are lots of energy-efficiency regulations in place already, and they are being tightened. Incandescent light bulbs are the top target at the moment. Both the European Union and Australia said earlier this year that they are planning to ban them. But the man in the vanguard of this green revolution is Fidel Castro, who started phasing them out two years ago.

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Fairfield v the valley

May 31st 2007
From The Economist print edition

Two competing models for the clean-energy business

Get article background

TWO men represent two very different models of the clean-energy business. One is Vinod Khosla, chief executive of Khosla Ventures, a company headquartered in Menlo Park, California, which employs ten people. The other is Jeff Immelt, chief executive of GE, a company headquartered in Fairfield, Connecticut, which employs 300,000 people.

Mr Khosla, formerly of Sun Microsystems and Kleiner Perkins Caufield & Byers, the venture-capital firm that launched many of the big names of the internet boom, is now the most visible venture capitalist in the clean-energy business. There is plenty of competition. Silicon Valley is piling into the business. John Doerr, the valley's best-known venture capitalist and one of Mr Khosla's former partners at Kleiner Perkins, also invests in clean-energy start-ups, sometimes alongside Mr Khosla. Larry Page and Sergey Brin, the founders of Google, have invested in Nanosolar, a company using solar thin-film technology. Microsoft's Bill Gates has invested in Pacific Ethanol, a company building bio-refineries in California.

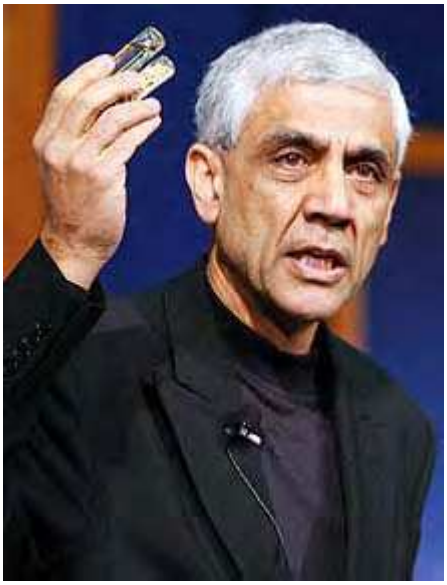
California is buzzing with clean-technology projects: breakthrough energy-storage systems; devices for making electricity grids more intelligent; enzymes that chomp their way through lignin to make ethanol; algae that can be turned into fuel. As the home of some of America's best universities, it is a natural place for such ideas to flourish. The notion of man-made climate change has been accepted for years in most universities, and the climatologists' work has influenced other academic departments. Stanford and the University of California at Berkeley both have big clean-energy programmes.

California's tough energy-efficiency and emissions regulations have given its businesses an interest in investing in clean energy. And some of the state's VCs are keen to spend the cash they made from the internet on improving the world. Not that they plan to lose money on it: investing in clean energy promises to satisfy both idealism and greed.

Mr Khosla is backing some 27 companies in four clean-energy areas: replacing oil, replacing coal, developing new materials and energy efficiency. His model is the usual one: he finds an inventor or a good piece of intellectual property, adds some money and an experienced manager and waits for it to flourish or fail.

Bud Klepper, for instance, had been working for years on a process to make cellulosic ethanol without anybody paying much attention. But then he met Mr Khosla, who liked his scheme, introduced him to Mitch Mandich, a former Apple employee, added some money and stirred. In February the resulting company, Range Fuels, announced that it would build a commercial-scale cellulosic ethanol plant in Georgia, using the state's abundant wood offcuts as feedstock.

Landov



Khosla thinks small

The VCs who used this model to transform the computer business reckon that they can do the same for the energy business. “The investments we're making are like those we made in the internet,” says Mr Doerr. “They're based on technological and scientific innovation, they're driven by entrepreneurs, and they're distributed, in the way that the internet was distributed.” The VCs also reckon that they can topple incumbents, as they did in the information and communications business. “Look at voice telephony,” says Mr Khosla. “These days, it's basically free. Ten years ago, people told me that would never happen. AT&T believed that—and look what happened to them.”

At the other end of the scale is Mr Immelt. “When I was looking at the

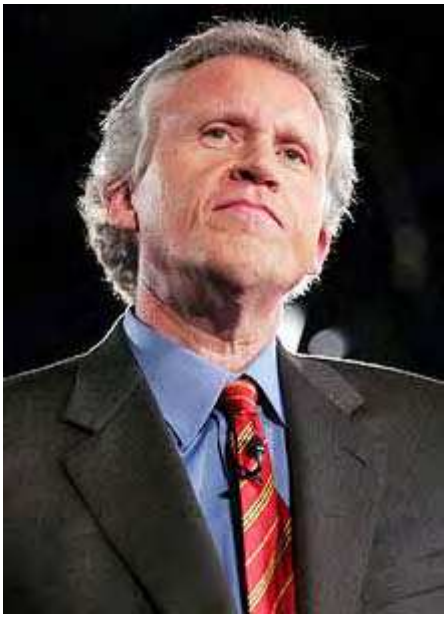
growth potential of our businesses three years ago," he says, "I saw an emphasis on clean energy and energy efficiency, on scarcity and the rise of regulatory pressure. And I thought—we've got something here." And so he developed the theme, making GE the big company best known for espousing greenness. "Green is green" has become a company mantra. And GE was among the ten companies that launched the United States Climate Action Partnership.

Green synergies

The vehicle that Mr Immelt settled on for promoting green products was Ecomagination. This brings together products from GE's different businesses that are either intrinsically green—like wind turbines—or have been certified as being more competitive and producing fewer emissions than whatever else of that sort is on the market. Not all GE's products get through. The GEnx aero engine, which powers Boeing 747s and 787s, did, but the new-generation CFM engine for narrow-bodied jets did not, because its emission levels are no lower than the competition's. Ecomagination's sales have been rising slightly faster than GE's, by 12% a year rather than 9%. Its energy products have been rattling along.

To a large extent, Ecomagination is a marketing device. GE was selling all those aero and power-generation engines long before Ecomagination was invented, and "fuel efficiency has always been the number one criterion for airline-engine economics," says Tom Brisken, general manager of the GEnx programme. But Mr Immelt has also made sizeable clean-energy investments. He bought Enron's wind-turbine business out of bankruptcy for $358m. Sales rose from $200m in 2002 to around $4 billion last year. His purchase of Chevron's integrated gasification combined-cycle technology—a potentially cleaner but costlier coal-burning technology for power stations—has still to prove itself, because GE has not yet sold a plant.

Landov



Immelt thinks big

GE's enthusiasm for greenery is informing its R&D effort. The company is, for instance, looking at radical ways of making aero engines cleaner. "Suppose we used a totally different fuel. Suppose we used a bio-derived fuel." says Sanjay Correa, GE's global technology leader for energy and propulsion. Biofuels are widely believed to be out of the question for aero engines because they are less energy-intensive, so more is needed to travel the same distance. But Mr Correa points out that aeroplanes these days have such a long range that they can cross the Atlantic with their tanks only one-third full. "We've done tests. We've studied this pretty hard. It works."

So who is best placed to win in the clean-energy stakes: the VC who helped transform the computer business or the chief executive of one of the great incumbents? The VCs point out that the energy business is becoming more friendly to small companies. Electricity generation is becoming more distributed as wind farms and solar panels feed into grids. Ethanol can be produced in backyard plants.

True; but that is happening at the margin. The big companies still dominate. According to Michael Liebreich of New Energy Finance, only around $2 billion of the $71 billion that went into the clean-energy investment last year was VC money.

The VC model is an excellent way of generating innovation, and fine for the early stages of clean-energy companies, but ultimately does not suit the energy business as well as it suits computing. Moving molecules around takes far more capital investment than moving bits of information around. Shipping fuel from refineries to petrol stations and running electricity grids are operations best done at scale; and the energy business's hunger for capital ensures a measure of protection for incumbents. Mr Khosla may very well produce some exciting new technologies and thus generate some valuable intellectual property; but it is Mr Immelt who will exploit them.

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Sunlit uplands

May 31st 2007
From The Economist print edition

Wind and solar power are flourishing, thanks to subsidies

Imaginechina

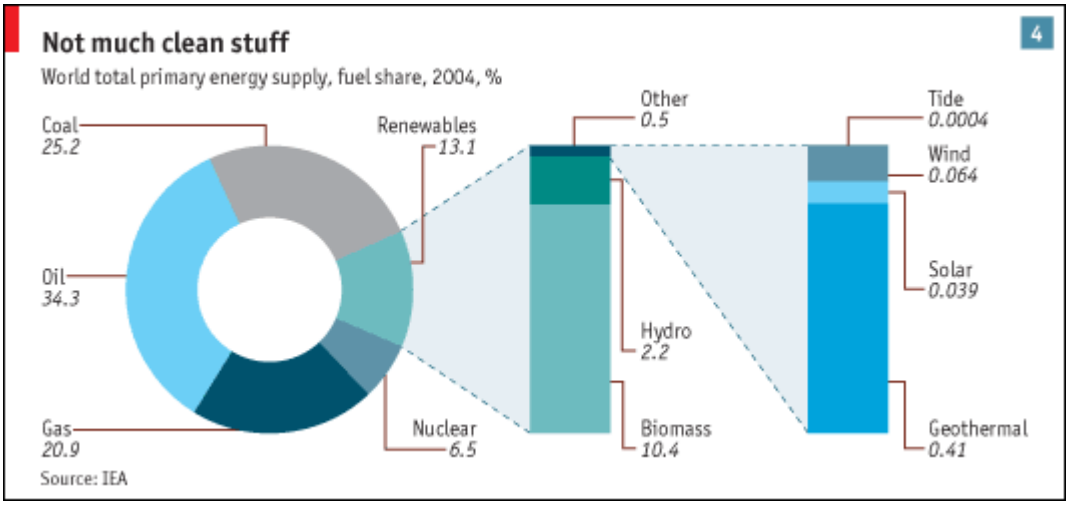
Get article background

LAST year Shi Zhengrong, a Chinese solar engineer, gave a new-year's party for his 3,500 employees in a sports stadium in Wuxi, in eastern China. He had much to celebrate. The company he started in 2001, Suntech, is now the world's third-largest manufacturer of solar cells, after Sharp and Q-cells. It is listed on the New York Stock Exchange and is worth around $5.5 billion. Mr Shi, aged 44, owns 40% of it. He was the richest man in mainland China last year, but according to *Forbes* magazine has been superseded by Wong Kwong Yu, an electrical retailer.

Renewable sources currently provide 13% of the world's energy needs. The main sources of renewable energy at present are geothermal and hydro-electric power and biomass. Scope for increasing the contribution of the first two is limited by geology. Scope for private-sector involvement is limited because building dams means turfing people out of their homes, so large-scale hydro-electric projects are undertaken only by governments.

Biomass provides 10% of the world's primary energy needs, mostly in developing countries, where villagers burn cow dung on basic stoves. There are a few niches in developed markets: in Britain, for instance, local councils increasingly require new developments to get 10-20% of their energy needs from renewable sources. Putting a biomass water-heater in the basement tends to be easier than sticking a windmill on the roof.

But the technology for producing electricity from biomass has not changed much in recent years, and shipping manure and woodchips over long distances is expensive. That leaves wind and solar power as the main sources of growth. Stirring figures are bandied about. According to the US Department of Energy, for instance, America could supply its entire energy needs by covering a mere 1.6% of its land area with solar cells.



Wind and solar energy already play an important part in a few countries. Around 20% of Denmark's electricity comes from wind and about 80% of China's hot water from solar energy. But worldwide those two energy sources barely register.

In the past they have flourished when oil crises pushed subsidies and investment their way. At other times they have survived in a tiny niche, providing power to isolated communities. But now they are enjoying their biggest boom ever. Solar photovoltaic power has grown by an average of 41% a year over the past three years; wind has grown by 18% a year.

The supply side offers part of the explanation. During the wind boom of the 1970s turbine blades were around 5-10 metres long, and turbines produced no more than 200-300kW of energy each. The energy they produced cost around $2 per kWh. Now the blades are up to 40 metres long and turbines produce up to 2.5MW each at a cost of 5-8 cents per kWh, depending on location (coal-fired electricity, depending on the plant, costs 2-4 cents per kWh). And there are even 5MW prototypes in existence, with 62-metre blades.

Much the same has happened to solar photovoltaic cells. The efficiency with which they convert sunlight to electricity has increased from 6% when they were first developed to 15% now. Their cost has dropped from around $20 per watt of production capacity in the 1970s to $2.70 in 2004 (though a silicon shortage has pushed prices up since).

Who's vulnerable 5

Top US power companies, by turnover, 2005

	Emissions disclosed tonnes, m	Cost of 25% cut in emissions at $22.57* $m	% of turnover
Constellation Energy	22.09	124.64	0.73
Exelon	12.61	71.15	0.46
Southern Company	137.00	773.02	5.70
Public Service Enterprise Group	24.81	139.97	1.13
American Electric Power	146.47	826.43	6.82
FirstEnergy	45.36	255.94	2.13
FPL Group	47.35	267.17	2.26
PG&E	0.54	3.02	0.03
TXU	50.00	282.13	2.70
Progress Energy	58.06	327.60	3.24

Source: Trucost *CO2 price per tonne

Making hay while the sun shines

Increased demand has fuelled the boom. Power companies are getting more interested in renewables. Electricity generation is particularly vulnerable to a carbon price, and the size of companies' emissions would determine how hard they would be hit by it (see chart 5). Coal-heavy companies such as American Electric Power and Southern Company would suffer more; companies such as PG&E and Exelon, which generate a larger proportion of their output from nuclear and renewables, would do better.

Many governments (see table 6) have set targets for the proportion of their country's energy that should come from renewable sources. Subsidies are one way to try to meet those targets. There are, broadly, three systems in operation: the expensive and effective (Germany's and France's feed-in tariffs), the complex and ineffective (Britain's and Italy's quota-and-trade system), and the unpredictable (America's production tax credit).

Off target

6

Green electricity

	Current proportion	Target proportion	Likelihood of success
Britain	4.1%*	10.4% by 2010. Nonbinding national target of 20% by 2020	No chance in 2010. 2020 target achievable only with offshore wind
Germany	10.4%*	12.5% by 2010. 20% by 2020	Likely
France	11.0%*	21% by 2010 No national target for 2020	Slow permitting set to miss target by over 50%
Spain	17.2%*	29.4% by 2010 No national target for 2020	On track until wind tariffs changed 2006-07. 22% likely
Italy	16.5%*	25% by 2010 No national target for 2020	Low because of slow permitting process, 20% likely
United States	10.0%*, >5.0% excl	No national target but binding renewable portfolio standards in 21 states	Fair depending on continuing build out of transmission capacity and political will
China	7.7%* of TPES†	15% of TPES by 2020	Likely overshoots as wind, solar, biomass and hydro industries surge
Japan	3.0% incl hydro and geothermal, 2.0% excl	3% by 2010 (no geo or hydro) 7% by 2010 (with geo & hydro)	High

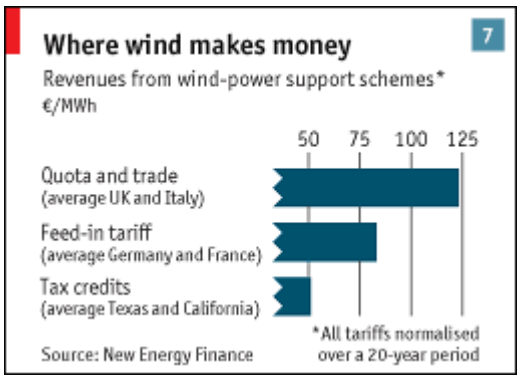
Source: New Energy Finance *Including large hydro †Total primary energy supply including fuel transportation

Germany's and France's feed-in tariffs give generators a fixed payment for the electricity they provide. Wind and solar energy have both grown fast in Germany, but the guaranteed price for solar energy is especially generous (54-57 cents per kWh against 8.4 cents for wind). According to Julie Blunden of SunPower, an American solar-cell manufacturer and distributor, Germany's feed-in tariff means that, as a generator of solar power, “you sell power to the utility at 50 cents and you buy it from the utility at 20 cents. You're clearing 30 cents.” According to Jerry Stokes, president of Suntech Europe, the payback period for a solar panel is eight or nine years, whereas the price for the electricity it generates is guaranteed for 20. Germany is the principal source of Mr Shi's wealth: in 2004 it was buying 90% of his output. The main customers are farmers who put panels on the roofs of their barns.

One consequence is a silicon shortage which has pushed up the price of solar panels, making them harder to afford in countries sunnier than Germany that could use them more effectively. Many panel-makers have signed long-term contracts with silicon producers at exorbitant prices. The boom has spurred investment in silicon production which is likely to lead to a lot of new capacity in a couple of years, and some of those cell producers are likely to be in trouble. Another consequence is a big bill for taxpayers and electricity consumers. Germany's feed-in tariff may cost consumers an extra €2 billion-2.9 billion a year in higher energy prices.

Under Britain's Renewables Obligation, a set proportion of the electricity that power distributors buy must come from renewable sources; if they fail to meet their obligation, they must put money into a pot to be shared among the renewables providers. The system is complex and the resulting price uncertain; which, along with planning constraints, explains why so much capacity has been planned and so little built. One consequence is that the pot of money is divided between few developments, which are therefore highly profitable (see chart 7). Another is that Britain will not meet its target of producing 10% of its electricity from renewables by 2010. That's one reason why, in its energy white paper published on May 23rd, the government promised a radical revision of the scheme.

America's production tax credit gives renewable-energy producers 1.9 cents per kWh, enough to encourage plenty of investment in wind, since in breezy places it is already competitive with some coal and gas generation. But the government has failed to renew it in some years, so investment in the business has slumped. Steve Bolze, GE's vice-president of power generation, says that uncertainty about the future of the production tax credit caused their turbine sales to halve between 2003 and 2004; sales then tripled, to 1,500 in 2005, when customers were once more confident of the subsidy.



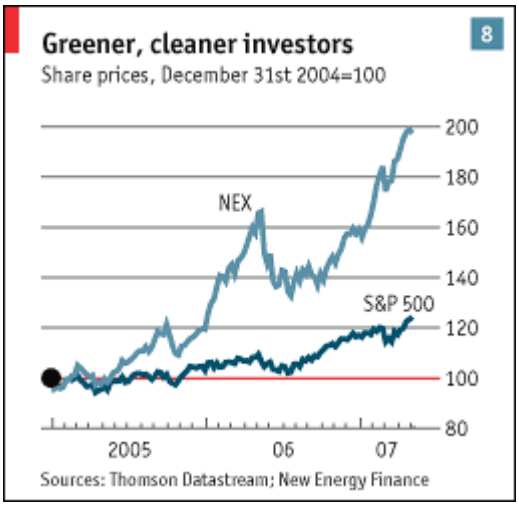
Governments are using sticks as well as carrots to push investment in renewables, requiring a proportion of the energy sold to come from renewable sources. In America, for instance, 21 states have renewable portfolio standards requiring a certain proportion of power sold—20% by 2017 in California, for instance—to come

from renewable sources. But it is in China that government fiat is having the most dramatic effect. The country currently meets 7.7% of its energy needs from renewable sources (including large-scale hydro). In 2005 it announced that the figure would rise to 15% by 2020. That has led to a huge rise in demand for wind turbines.

China's turbine market, says Paulo Soares, a Brazilian who runs the Chinese operations of Suzlon Energy, India's biggest wind company, has increased sevenfold in two years. Suzlon has just opened the world's biggest turbine factory in China. All the big foreign makers—Spain's Gamesa, Denmark's Vestas, GE and Suzlon—have piled in, along with a lot of smaller ones. But the Chinese government is determined to build a local industry, demanding that 70% of parts should be locally produced. There are now nine Chinese turbine-makers.

Despite the current boom, there are constraints to the growth of renewables. One of the reasons why wind power has developed so slowly in Britain is the proliferation of little local battles over planned developments. Scotland, which is empty and windy, sounds like a good bet, but most of the demand is in England, so the electricity would have to travel a long way. Highlands Before Pylons is a pressure group that campaigns against the aesthetic consequences of long-distance transmission. Such groups, not wanting to appear hostile to a virtuous power source, tend to argue in favour of offshore wind farms, but these are considerably more expensive than onshore ones.

Despite the difficulties, however, money is flowing in (see chart 8). The NEX represents pure-play clean-energy companies, some of which have grown big. Denmark's Vestas, for instance, with a market capitalisation of $12.5 billion, is the world's biggest turbine producer. In wind energy, GE is playing catch-up.



The beauty of being big

But, for the big energy companies, catching up may not be all that hard. BP, for instance, has been producing solar cells, in a small way, for 30 years. Now it is investing heavily, in its much-vaunted determination to look Beyond Petroleum. In a joint venture with India's Tata, for instance, it expects to produce 300MW of solar cells a year by 2010; and in March this year it announced that it will also build a 300MW factory in Spain. Through a joint venture with Clipper, an American turbine manufacturer, it plans to turn itself into a significant wind-power generator.

BP has two advantages in the renewables business. It knows about energy, and it is big. Next year it will devote a mere 4% of its capital expenditure to renewables. But that adds up to $800m which, for most renewables companies, is a lot of money.

Is it money well spent? Some do not think so. “Exxon was a big investor in solar in the 1970s,” says Ken Cohen, Exxon Mobil's head of public affairs. “We got out of it because we couldn't make money out of it. We bring nothing unique to solar, wind or nuclear. But we certainly bring much that's unique to the world's petroleum business. That's a full-time job.”

Technology will in part determine who is right. If renewable energy goes on getting cheaper, it will get more attractive. Vlatko Vlatkovic, head of GE's renewable energy research, reckons that wind power is heading towards 3-4 cents per kWh. To achieve that, he says, the length of turbine blades needs to increase to 90 metres. The weight of the central cell, positioned between the blades, is a problem. “At the moment the cell weighs 300 tonnes. That's sitting 100 metres up in the air. Just scaling up is not viable. All the stuff in the cell has to get lighter, so the way we build these generators has to change.”

But wind is now so big—it is approaching the size of GE's gas- and steam-turbine business—that companies are investing seriously. Up to now, says Mr Vlatkovic, turbines have been made from different

technologies spliced together: propulsion equipment developed for ships and standard variable-speed drives used in pumps and conveyor belts. “Now the business is so big that we can design equipment specifically for wind.”

There is an upside to the silicon shortage: it has accelerated investment in thin-film technologies that use much less silicon. Silicon Valley is particularly interested in these developments. Two of the most advanced thin-film companies are Miasole and Nanosolar. John Doerr has invested in the first and Larry Page and Sergey Brin in the second.

Politics will also help determine renewable energy's future. If the carbon price and subsidies rise, its prospects should be good. But wind and solar are not as vulnerable to politics as the carbon-free technology that, in many ways, has the most potential to free the planet from fossil fuels: nuclear power.

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Boom

May 31st 2007
From The Economist print edition

As security and climate concerns rise, nuclear power may be coming back

Get article background

JAPAN STEEL WORKS is in an enviable position. The core of a nuclear power plant demands huge steel forgings that weigh up to 240 tonnes. With the nuclear industry in the West in decline for nearly three decades, Japan Steel Works is one of the few companies left that can do the work. According to Yoshitaka Sato, who is in charge of the company's exports of forgings and castings, orders have doubled over the past two years. Capacity has just been expanded, but slots are now fully booked to the end of 2010 and further capacity may be added.

REX

Rising again?

The nuclear industry has been chugging along in Asia, but in the West safety worries have caused it to stall. Nuclear power stations are, therefore, ageing. They contribute a sizeable chunk of electricity in the rich world—18% in Britain, 19% in America and 80% in France—so if they are replaced by coal-fired stations, CO_2 emissions will rise swiftly. Hence the recent revival of interest in nuclear power.

In Europe, this has so far been modest. Finland is building a reactor, and France, which never lost its enthusiasm for the technology, has placed a firm order for one. Britain intends to speed up the planning process for nuclear plants, and nervousness in Germany about energy security has led to a heated debate about a law requiring the phase-out of nuclear power.

It is developments in America, which has 104 of the world's 443 nuclear plants, that excite the industry. No new plants have been ordered there since the accident at Three Mile Island in Pennsylvania in 1979 (when radioactive gas escaped from a nuclear power plant), though some that were being built were completed. Many proved a burden. In 1988, Public Service Company of New Hampshire became the first American utility since the Depression to go bankrupt, mostly because of the unexpected costs of a nuclear plant.

Since then, three things have changed. First, the approvals process was reformed in the 1990s. An application alone can cost $20m-100m, so that matters. “The intention was to offer a degree of comfort to Wall Street,” says Jeff Merrifield, one of America's five nuclear commissioners.

Second, there was global warming. “Our recognition that carbon was a problem was a tipping-point in the decision-making,” says Jim Rogers, chief executive of Duke Energy, which already has seven nuclear plants and is planning to build another. “You wouldn't take such a big risk if you weren't going to be in a carbon-constrained world.”

Third came the Energy Policy Act of 2005, which gave the industry a production tax credit worth 1.8 cents per kWh, provided $1.25 billion for innovative technologies and made available $2 billion in insurance against regulatory delays. For a plant to be eligible, the application has to be in by the end of next year, so the race is on: 22 companies have told the Nuclear Regulatory Commission (NRC) that they are planning a total of 32 new reactors.

Suppliers are gearing up. “We have been pouring in money and people,” says Andy White, president of GE Nuclear Energy. “We're making a big bet on nuclear.” Last year Areva, the big French nuclear-construction company that is building the Finnish plant, bought Sfarsteel, a loss-making company which produces some of the large steel forgings needed. Toshiba bought Westinghouse, which has bounced among owners over the past decade. Now Mitsubishi Heavy Industries and others are trying to get designs certified for the American market.

But three tricky issues remain. The first is waste. The Department of Energy has spent $9 billion on studying the main proposed burial site, Yucca Mountain, without coming to a decision. But the absence of a long-term burial site may be less of a problem than it seems. The NRC reckons that waste can be kept safely in dry-storage casks surrounded by inert gas for 100 years while a solution is pursued.

Second, there is terrorism. The NRC's Mr Merrifield says that nuclear plants, with three-foot-thick concrete walls, are robust enough to withstand most forms of attack; but given the modern terrorist's proven ability to surprise, not everybody will be satisfied by such reassurances.

Third, there is cost. A study by MIT put the cost of nuclear electricity at 6.7 cents per kWh, against 4.2 cents per kWh for pulverised coal. Suppliers say it would be wrong to judge nuclear power on the basis of past performance, since better technology coming on to the market will cut costs significantly; but the cost overruns at Areva's new Finnish reactor do not inspire confidence.

New plants are needed to show whether they can be more cost-effective than the previous lot. And it looks as though America may build them.

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Dirty king coal

May 31st 2007
From The Economist print edition

Scrubbing carbon from coal-fired power stations is possible but pricey

Get article background

THERE are two remarkable things about Sleipner T, a gas rig in the middle of the North Sea owned by Norway's state-owned oil company, Statoil. One is the working conditions. Technicians get around NKr600,000 ($100,000) a year, private rooms with televisions and ensuite bathrooms, and work two weeks out of every six. That is what you get when social democracy meets oil wealth.

The other unusual thing about Sleipner T is that the CO_2 which has to be extracted before the gas can be sold does not contribute to global warming. Instead of being pumped into the atmosphere it is reinjected into the ground, 1,000 metres below the seabed. That is what you get when an innovative company meets a carbon tax.

Statoil started capturing and storing its carbon dioxide in 1997, five years after Norway introduced a carbon tax. Nobody paid much attention then, but these days Statoil gets a regular stream of visitors because carbon capture and storage (CCS), also known as carbon sequestration, is widely seen as a possible quick fix for global warming.

It is the abundance, cheapness and dirtiness of coal that makes CCS so appealing. Coal produces 50% of America's electricity, 70% of India's and 80% of China's. It is widely distributed around the globe, which enhances its attractions at a time of concern about energy security. Burning coal is the cheapest way of generating electricity. And coal produces around 40% of the CO_2 emissions from energy use.

High gas prices have meant that coal has been enjoying a revival in recent years. In America some 150 new coal-fired power stations are on the drawing board. In China, two 500MW coal-fired power plants are starting up every week, and each year the country's coal-fired power-generating capacity increases by the equivalent of the entire British grid. So anything that offers the prospect of cleaning it up is attracting a great deal of interest.

Standard pulverised-coal (PC) generation can be made a bit cleaner by burning the fuel at higher temperatures. “Ultrasupercritical” generation can cut CO_2 emissions by a fifth. But if demand goes on increasing, that is not enough. Hence the interest in CCS.

Guardian

Sending carbon back where it came from

CCS is being done in three places—at Sleipner; at In Salah in Algeria, where the CO_2 removed from gas produced by a joint venture between BP, Statoil and Sonatrach, Algeria's state-owned energy company, is stored in the desert; and at the Weyburn oil field in Saskatchewan, Canada, where the CO_2 produced by a coal gasification plant in North Dakota is piped across the border and used to increase the pressure in a partly depleted oil field. This process, known as enhanced oil recovery (EOR), is in use in 70 oil fields around the world, but at Weyburn, unusually, some of the CO_2 remains underground.

Most of the operations involved in CCS are familiar. First, the CO_2 must be separated from other gases. At Sleipner, for instance, the CO_2 content of the gas that emerges from the oil field is 9%. That has to be reduced to 2%, which is done by passing the gas through amines (nitrogen-based chemicals). Second, the CO_2 is moved along in pipelines. That is commonly done in EOR, as is the third stage—injecting it into the ground.

The fourth stage is the least familiar. When CO_2 is being used for EOR, it returns to the surface (except at Weyburn). For sequestration, however, the CO_2 must be stored underground, probably in depleted oil and gas fields or in porous briny rock. Statoil has been doing this for a decade at Sleipner, and there is no sign of the stuff bubbling up again. Scientists say that within decades or centuries it will dissolve, and within centuries or millennia it will react with elements in the rock and form new minerals. But this part of the process needs more study.

The challenge is to put all those technologies together and deploy them at a reasonable cost, and on a scale that can make some impact on emissions. That will take some doing. If 60% of the 1.5 billion tonnes of CO_2 that America produces every year from coal-fired power stations were liquefied for storage, it would take up the same amount of space as all the oil the country consumes.

Coal-fired power stations are the likeliest candidates for CCS because they are dirty and numerous. But there is a difficulty with PC plants: they spew out a huge volume of flue gas, of which CO_2 is only a small part. Separating it from other gases is expensive. The main alternative is to turn coal into gas before using it to generate electricity. The resulting CO_2 and hydrogen are then separated, the hydrogen used to generate electricity and the CO_2 stored. A few such integrated gasification combined-cycle (IGCC) plants have been built.

Every which way

Now that power utilities are beginning to accept that they will have to do something about carbon, the big question is what. GE has bought Chevron's IGCC technology. The cost of generating electricity from it, according to GE's Steve Bolze, is 20-25% more than a PC plant, but Mr Bolze believes that, once the cost of separating carbon is taken into account as well, IGCC may be cheaper.

Philippe Joubert, president of power systems at Alstom, which in March announced a joint venture with American Electric Power, America's biggest coal-fired generator, rejects the idea that IGCC is cheaper, even with CCS. “This is clearly not true. We should know. We are in IGCC as well as PC. It's clearly 10% more expensive. All serious academics realise that it is more expensive.” A study by MIT published in March tends to side with Mr Bolze. Generating electricity from an IGCC plant with carbon capture, it maintains, is 35% more expensive than PC without CCS; but PC with CCS is 60% more expensive than PC without.

Plans for IGCC plants are proliferating. In America, at least, that says more about subsidies than about faith in the technology's future. George Bush announced a $2 billion clean-coal initiative in 2002, and the 2005 Energy Policy Act, notorious for its pork content, included $1.6 billion-worth of subsidies for coal gasification.

According to the International Energy Agency, around 15 power plants with CCS are being planned and another seven CCS projects are on the drawing board. Most make economic sense either because of direct subsidy or because of their particular economic circumstances. Statoil and Shell are planning to sequester CO_2 from a Statoil power plant on the Norwegian mainland under Shell's Draugen platform. The investment is justified by Norway's carbon tax, currently about €50 per tonne. BP is planning a petroleum-coke-fuelled power plant in California, where electricity is particularly expensive and the petroleum coke for the power plant comes as a by-product of oil refining; the project is a joint venture with Edison International, an electricity company.

One big company that is making a sizeable punt on CCS is Vattenfall, which is building a 30MW plant in Germany. “I'm totally convinced”, says Lars Josefsson, Vattenfall's chief executive, “that the issue of carbon sequestration will change the way we do business in the long term. I believe the companies that realise that soonest will be the winners.”

If CCS is to take off, the rules on CO_2 storage need sorting out. The 1996 London protocol on dumping waste at sea was amended earlier this year to allow CCS at sea. But rules on land need attending to, for promoters of CCS worry that it will become as contentious as nuclear waste.

And, as always, there is the problem of cost. At present, academics reckon that it would take a carbon price of around $30 to make sequestration economic—below the peak that the ETS hit briefly in 2006,

and way above the $10 safety valve in the only carbon bill in Washington, DC, to mention a figure. But the cost may come down, because that is generally what happens as technologies are commercialised.

Despite the tricky economics, the sheer abundance of coal is an argument for pursuing CCS. And if it can be made to work, it has a certain poetic circularity: the carbon extracted from the earth as fossil fuel shall return unto the earth whence it came.

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The drive for low emissions

May 31st 2007
From The Economist print edition

Car and fuel companies are investing in clean transport

Get article background

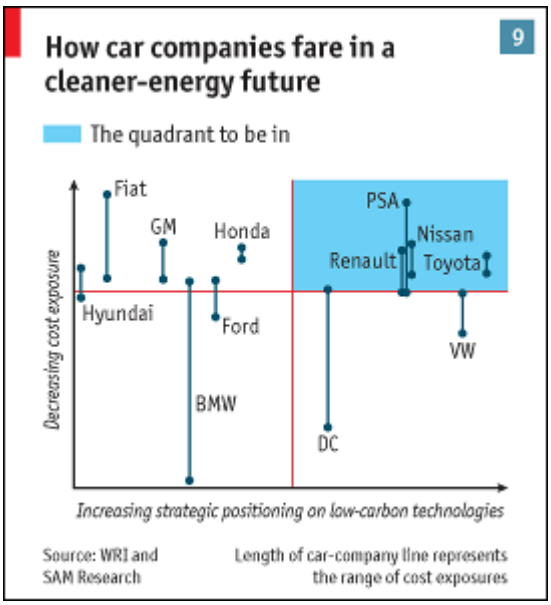
KEN LIVINGSTONE, the mayor of London, last year caused a mild panic among drivers who cruise the city's narrow streets in “Chelsea tractors” (SUVs to the rest of the world). He announced that he was planning to charge cars emitting more than 225g of CO_2 per kilometre £25 a day to go into the centre of London rather than the standard £8. “Red Ken” has always enjoyed stirring it among the rich, so he was probably quite happy at the stink he caused.

Worldwide car ownership is growing around 5% a year, so if emissions from cars are to be cut, engines will have to become dramatically more efficient, or there will have to be a technological breakthrough to replace petrol with a clean fuel. Now that governments seem to be getting serious about emissions, car and fuel companies are getting serious about finding less polluting alternatives.

Fuel-efficiency regulations of varying kinds already exist in all the countries that matter, but in America, where they were fairly tough during the oil crises of the 1970s and 1980s, they have lost their bite. Improvements in engine efficiency have been used not to reduce fuel consumption but to weigh cars down with gizmos. And car companies have carried the burden of those regulations. Fuel companies, so far, have got off scot-free.

That seems to be changing. Mr Livingstone's initiative is only one of many new measures that have been proposed around the world to cut vehicle emissions. California is trying to impose greenhouse-gas emissions standards on cars, though the motor manufacturers have taken the state to court on the ground that this is federal-government business. In his most recent state-of-the-union address, George Bush's big concession to the greens was to propose a 4% a year tightening in fuel-efficiency rules.

The EU has had a long-standing voluntary deal with the carmakers under which they would aim to reduce the average CO_2 emissions of their fleets to 120g/km by 2012. But thanks to consumers' growing enthusiasm for high-power, high-emissions cars, that seemed unlikely to happen, so this year the European Commission decided to impose a mandatory standard. There was a big row, but the commission got most of what it wanted.



And now governments are taking aim at fuel companies too. In January California announced that by

2020 it will require a 10% reduction in the carbon emissions that a fuel emits over its life cycle. That has implications for “unconventional oil”—petrol made from oil shale and tar sands. Although CO_2 emissions from the resulting fuel are the same as those from conventional sources, producing it is a filthy business, so such rules will discourage its use. Europe is planning to follow California. That is not necessarily a coincidence. There is a lot of traffic between Brussels and Sacramento on green issues.

Tighter regulation will not hit all companies equally (see chart 9). German car firms are particularly vulnerable, which was why they made the most fuss about the commission turning the voluntary target into a mandatory one. The French and the Italians were smugly silent.

A corny idea

“This industry is 98% dependent on petroleum. GM has concluded that that's not sustainable,” says Larry Burns, GM's vice-president of R&D and strategic planning. “It's all about displacing petroleum.”

The Prius's success—390,000 Americans own one—is a testament to Toyota's vision and marketing. But it is not clear how much potential there is in the hybrid market. Bill Ford announced in 2005 that his company would be building 250,000 hybrids by 2010, but it no longer seems to be aiming for that. Anyway, hybrids are not a solution to global warming. Their somewhat greater fuel efficiency will soon be offset by the increase in global car ownership. More radical technological changes are needed.

Ethanol is one possibility, because although burning it emits CO_2, growing the crops needed to produce it absorbs the stuff, at least in theory. The farming lobby has been pushing it as a new source of revenue. The car industry is keen on it: if the fuel changes, then the cars don't have to. GM has been running a “live green, go yellow” campaign to promote it.

Ethanol currently accounts for only 3.5% of American fuel consumption, but thanks to heavy subsidies its use is growing by 25% a year, says Matt Drinkwater of New Energy Finance. When oil prices were at their peak, the payback period on an ethanol plant was 11 months. Not surprisingly, they have sprung up all over the Midwest. Soaring demand for maize for ethanol caused the sharp rise in the corn price which led to “tortilla riots” in Mexico.

There are three problems with corn ethanol. First, the market is limited. At present, any car can take E10 fuel (10% ethanol) but only 6m out of America's 237m cars and trucks are “flex-fuel” vehicles that can take E85 (85% ethanol). Converting a car costs only around $200, but invalidates the guarantee. Detroit has promised that half of its output will be “flex-fuel” by 2012.

Second, corn ethanol is expensive. At the pump it is competitive with gasoline; but according to the International Institute for Sustainable Development, America's subsidy costs taxpayers somewhere between $5.5 billion and $7.3 billion a year. And high tariffs keep out imports of cheap Brazilian ethanol made from sugar cane.

Third, corn ethanol is not very green. Some people think that corn ethanol is responsible for more emissions than it saves, because so much energy is used in growing the corn. Dan Kammen and Alex Farrell of the University of California at Berkeley reviewed six studies on the issue and concluded that, gallon for gallon, ethanol is probably 10-15% better than petrol for emissions of greenhouse gases. That is a help, but no panacea.

A better bet may be cellulosic ethanol—ethanol that can be made out of straw, switchgrass, wood chips—pretty much anything with cellulose in it. Mr Bush, keen on a technological quick fix for global warming, has offered $385m in government subsidies to bring cellulosic ethanol to market.

A lot of people are trying. Vinod Khosla's company, Range Fuels, is planning to build a commercial-scale ethanol plant in Georgia. Using woodchips as a feedstock, it employs heat and chemicals to break down the tough bonds in cellulose molecules. Up to $76m of subsidy will help it on its way. Many companies are working on suitable enzymes to break down those bonds. One such is Iogen, in which Goldman Sachs and Shell have taken stakes. It will be getting up to $80m from the government.

One further problem with ethanol is that it is less energy-intensive than petrol, so you get fewer miles per gallon. That is one reason why BP is putting its money into a different fuel, biobutanol, which is more energy-intensive than ethanol. BP is developing it in a joint venture with DuPont, for which biobutanol

offers a possible way into the fuel business.

And then there is the electric car—not the hybrid car that uses electricity for pottering about in the city and switches to its combustion engine at speed, but the fully electric sort that uses either a hydrogen fuel cell to produce electricity or a battery to store it.

Hydrogen is an attractive way of powering a vehicle because it can be made from all the sources that electricity can. But hydrogen fuel cells have been just around the corner for a long time. GM has been working on them since the 1960s, and reckons that so far it has spent $1 billion. The technology's appeal is obvious, for it could revolutionise not only the car: if the hydrogen fuel cell can produce electricity to power a vehicle, why not a house as well?

There was a bubble of excitement about fuel cells in the late 1990s, and shares in companies such as Ballard Power Systems rocketed. But hopes that a fuel-cell car would be on the market early this decade were disappointed. The fuel cell, says Shell's Duncan Macleod, was “overpriced and over-promised at the front end”.

Still, fuel-cell vehicles are getting onto the roads. London ran three buses for a three-year trial and is now planning to buy ten. There are around 60-80 hydrogen buses and 200 cars on the road worldwide, and a few filling stations. Shell, which is taking hydrogen seriously, is about to open its first filling station in California. It has one already, in Washington, DC, to service ten cars, and another in Iceland, for three buses. It is an expensive business. London's three-year, three-bus trial cost £4.5m. Hydrogen cars cost around $1m each to build, according to Mr Macleod. At the pump the hydrogen costs $5 a kilo—about the same, in terms of mileage, as current petrol prices. How much does it cost Shell to make? “A lot more than $5,” says Mr Macleod, laughing.

GM is also working on battery technology. At this year's Detroit motor show it unveiled the Chevrolet Volt, which has both a battery and a combustion engine. The technology got generally good reviews, but GM has not said when it will start producing the car commercially.

Meanwhile, rushing up on the inside lane are those disruptive people from Silicon Valley. Last year Elon Musk, a South-African-born entrepreneur who started PayPal, an online payments system, unveiled the Tesla, an electric sports car. It plugs into the wall and stores the energy in a lithium-ion battery—the sort used in laptop computers, only with 6,831 cells. And it's a pretty, and nippy, little car. “A Porsche can accelerate from 0-60 in 4.7 seconds,” says Mr Musk with understandable pride. “The Tesla can do it in four seconds.”

It has a few disadvantages. The first is cost. Mr Musk has pre-sold the first 350—the first 120 of those for $100,000 apiece. “The average net worth of the first 120 customers is over $1 billion,” he says. However, he plans to start work on a budget version next year. The second is range. The Tesla's maximum is 250 miles. If there are other downsides, they may become clear in August or September this year, when the first production models should slip silently off the production lines and onto America's roads.

Clean-energy entrepreneurs may find the transport business harder to crack than power generation, because the existing infrastructure of pipelines and service stations is dedicated to petrol. Yet Brazil, where sugar ethanol now accounts for 40% of fuel used by cars, shows that it can be done. Now that governments are beginning to lean on big oil as well as on the car companies, the drive towards cleaner transport is likely to pick up speed.

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The final cut

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From The Economist print edition

Business can do it, with governments' help

Get article background

THESE days business is full of enthusiasm for combating climate change. That is a good thing, but there are risks.

One lies in the very voguishness of the issue. Climate change is fashionable, and although fashion has the virtue of being able to transform the dull and worthy into the hip and happening, it is, by definition, transitory. Hollywood stars will probably get bored of their Priuses, and executives may become weary of mouthing green platitudes and move on to whatever branch of corporate social responsibility next catches the popular imagination.

A second risk lies in the volatility of the oil price. The higher it goes, the better the prospects for constraining carbon. Shares in clean-energy companies rose with the oil price in 2004-05 and dipped last year; but the oil price remains historically high, thus supporting the current optimism about green business. In the long term the oil price is expected to be above $50, which would be good for clean energy. But should it crash, those who had invested heavily in renewables and other alternatives to fossil fuels would look silly.

The third risk is political. Companies investing in energy efficiency and alternatives are banking on incentives to provide them with decent returns on their investments. But unless those incentives rise, the clean-energy boom is likely to turn to bust.

Consumers are not likely to provide companies with the incentive to go green. They may like the warm glow they get from buying ethically sound products, but there is little sign that they are prepared to spend more money on them. Not even 1% of passengers have taken up BA's very reasonably priced offer to offset the carbon emissions of their flights (£5 for London-Madrid, £13.50 for London-Johannesburg). That may be because people are selfish—or it may be because they are rational enough to know that their individual economic choices are not going to make a blind bit of difference to the future of the planet. Nobody is going to save a polar bear by turning off the lights.

Eyevine

It's getting unbearable

As voters, however, people can make a difference. Climate change is a collective problem, which can be dealt with only collectively. Voters can encourage that by electing governments committed to changing the rules to encourage companies to behave differently.

There are three ways for governments to persuade companies to constrain carbon: subsidies, standards and a carbon price. Subsidies are popular with recipient companies; with greens, who reckon that any

money used to combat climate change is well spent; and with governments, which like handing out taxpayers' money. Taxpayers tend not to notice. Some economists also advocate subsidies to particular technologies because they need a kick-start to get them to market. That may be true in the case of big, risky processes such as CCS. But subsidies tend to be inefficient because they require governments to pick technologies. And, once in place, they are hard to abolish.

A second way for governments to discourage emissions is by setting standards for products and processes (such as imposing energy-efficiency requirements for buildings, or banning incandescent lightbulbs). Such standards are usually a bad idea, for they require governments to tell the private sector how to allocate resources, and the private sector tends to be better at that than governments are. But given the market's inability to eliminate energy waste from buildings, and society's interest in doing so, they are probably worth having in this case.

Still, a carbon price is likely to be the best way to cut emissions. That can be established through either a tax or a cap-and-trade system of the sort Europe has.

A tax would be the better option. Unlike a cap-and-trade system, which stipulates the amount of CO_2 that may be emitted and allows the price to vary, a tax sets a price and lets it determine the quantity emitted. The volatility of the carbon price in Europe, which has variously risen above €30 and dropped to close to zero, is blamed in part for the lack of investment in clean energy, so there is a lot to be said for setting a price. But the prospects for a tax are not good. Business—particularly in America—is allergic to the very word; and the allowances which companies tend to be handed in the early stages of a cap-and-trade system have an obvious appeal to companies concerned about rising costs.

Whichever way a carbon price is established, the big question remains: can it be set at a level high enough to make a difference to climate change without derailing the world economy?

Probably. According to Richard Newell of Duke University, economists' estimates of the carbon price needed to stabilise CO_2 concentrations at 550 parts per million (widely reckoned to be a safeish level) range from $5 to $30 per tonne by 2025 and from $20 to $80 per tonne by 2050. The Intergovernmental Panel on Climate Change came out with fairly similar figures in its fourth report earlier this year—$20-50 per tonne by 2020-30. Mr Newell reckons that, in America, $20 per tonne would raise petrol prices by an average of 18 cents (or 6%) per gallon, and electricity prices by 14%. A $50 price would raise petrol prices by an average of 45 cents (or 15%), and electricity prices by 35%.

At the bottom end of the range these costs are not huge. Even at the top end they are manageable. The IPCC's estimates of what a $20-50 carbon price would do to world GDP by 2050 range from a slight increase on what it otherwise would have been to 4% less. The average is 1.3% less, which would mean that average annual growth would be around 0.1% lower than it might otherwise have been.

Those prices assume that the entire world adopts a carbon price. That is a heroic assumption. Persuading developing countries to do so will be very hard.

It cannot be done unless all rich countries take the first step. They need to set an effective carbon price, and show the developing world that they can do so without ruining their economies. It wouldn't be a solution to climate change, but it would be a start.

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American corporate governance

Hail, shareholder!

May 31st 2007 | NEW YORK
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David Simonds

Activist shareholders are getting tough with boards and managers

WHEN historians of American corporate governance pick up their pens, Home Depot's annual shareholder meeting in 2006 will be seen as a pivotal moment. Bob Nardelli, the retailer's boss, was the only director to show up. Large clocks were used to keep the utterances of talkative shareholders to a minimum. Mr Nardelli, whose combative style earned the firm the nickname “Home Despot”, did not take questions. The whole event was over in less than 40 minutes.

This year's meeting, which took place on May 24th, was altogether different. Mr Nardelli had gone, having been ousted in January, largely as the result of shareholder pressure. So had the clocks. The new boss, Frank Blake, apologised for the previous meeting and took questions. Almost every board member attended, new among them a founder of Relational Investors, an activist fund-manager which had been agitating for a greater say in the company's strategy. The message was clear: the board is accountable to shareholders.

The changes at Home Depot are more striking than most, but owners are flexing their muscles everywhere. Last month shareholders at Verizon and Blockbuster became the first in America to give majority backing to resolutions calling for an advisory shareholder vote on executive pay. Such “say on pay” resolutions were unknown in America before last year, but more than 60 have been filed this year and support is averaging more than 40% during this year's round of annual shareholder meetings. Take-up has been extraordinary, says Stephen Davis, a veteran corporate-governance watcher.

Shareholders have also shown support for proposals to give them a greater say on poison-pill defences (Hewlett-Packard, Disney) and to eliminate staggered boards, forcing every director to stand for election each year (Limited Brands, McGraw-Hill). And majority voting is fast displacing plurality voting, in which there is no way to vote against a nominee, in board elections.

This increased level of activism has deep roots. The rise of defined-contribution pension plans has been shifting power towards individual investors for years. WorldCom and other failures of oversight at the start of the decade did much to erode traditional deference towards management and boards. And the cost of transmitting information to and between shareholders has fallen, making it easier to launch and fight campaigns.

The emergence of a new type of activist investor—deep-pocketed hedge funds—has also had a galvanising

effect. Motivated less by broad governance concerns and more by financial ones, activist funds build stakes in firms and use their clout to push for changes in strategy, from putting the company up for sale to putting their own people on the board. If persuasion fails, confrontation is rarely far behind. “These are ‘Type A’ individuals, traders not investors,” says Chris Young of Institutional Shareholder Services (ISS), a proxy-research firm.

Activists now sit on the boards of businesses such as Heinz, Wendy's and Applebee's, as well as Home Depot. Even failed campaigns, such as Carl Icahn's recent attempt to win a seat on the board of Motorola, a troubled telecoms-equipment firm, have the salutary effect of telling managers that they are being watched. And funds' appetites appear to be growing: on May 16th it emerged that Eddie Lampert, a famed activist, has acquired 15m shares in Citigroup, the world's largest financial-services firm.

Calling the shots

Notable votes on shareholder proposals, 2007

	Issue	% support
KB Home	Golden parachutes	85.6
International Paper	Majority voting in director elections	85.0
MeadWestvaco	Redeem/vote on poison pills	79.3
McGraw-Hill	Repeal classified board	77.0
Honeywell	Shareholders may call special meeting	72.4
Convergys	Reincorporate to Delaware	59.5
Blockbuster	Say on pay	57.0
CVS Caremark	Options reform	48.4
Hewlett-Packard	Proxy access	43.0

Source: ISS

Activist funds would not be effective without the support of other shareholders, chief among them big institutional investors. These investors are becoming more outspoken, too. Greater transparency is one reason. Since 2004 disclosure of how they vote on proxy resolutions has forced fund managers to think much harder about their stance on governance-related issues. Newer concerns that companies they invest in are being sold for a song to private-equity firms are also provoking funds into action. Opposition by Fidelity, a fund manager, to the proposed sale price for Clear Channel Communications, a media company, has led not just to higher offers from the suitors, but also the chance for shareholders to retain shares in the company once it has gone private. According to SharkRepellent.net, a website that tracks takeover defences, public campaigns against merger transactions in 2006 led to better offers in a quarter of cases.

The outlines of the next big governance battle, over shareholders' rights to nominate directors, are already visible. Three shareholder resolutions have been introduced this year and America's stockmarket regulator, the Securities and Exchange Commission, held a public consultation on the issue in May.

Is all this activism good for corporate America? It is too early to say whether activist hedge funds can extract long-term value—some are keen simply to sell firms to private-equity buyers or to load company balance-sheets with debt. But investors lucky enough to hold a portfolio made up of firms that were involved in activist fights in 2005 would have enjoyed excess returns since then, says ISS. And a study published last year by Alon Brav, Wei Jiang, Frank Partnoy and Randall Thomas examined 374 interventions by 110 activist hedge-funds in 2004-05, around 40% of which were hostile, and found that shares in the target firms outperformed the market over various periods, particularly when the hedge fund tried to get the firm to change strategy or put itself up for sale.

Critics worry that as shareholders become more demanding and their clout increases, hamstrung managers and boards will be more inclined to sell out to private equity. “Activists seem to assume there is no alternative to the public markets, and increasingly there is,” says Paul Danos, dean of Tuck School of Business and a board director himself. But harried managers may conclude that the best approach is to adopt corporate-governance reforms that increase shareholder democracy and so give them a stronger mandate. If shareholders are able to elect directors and hold them properly accountable for their performance, then they should be more willing to let them get on with the job.

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German corporate governance

Shareholders at the gate

May 31st 2007 | OLDENBURG AND FRANKFURT
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A family firm takes on the hedge-fund "locusts"

THE medieval Schloss at Oldenburg used to be ten-sided and surrounded by a moat. Now only a baroque segment remains. The north German city has also largely capitulated to foreign firms: its narrow streets host numerous international brands such as McDonald's and Body Shop. But one Oldenburg company, despite being listed in Frankfurt, has been fighting a rearguard action against modern capitalism. The battle came to a head in April at a stormy shareholder meeting and is now turning into a legal fight. The clash between the old "family" values and new "locust" capital neatly illustrates the impact of globalisation on Germany's Mittelstand.

CeWe Color, a family-owned photographic and digital-imaging firm, went public in 1993, but a family trust hung on to 27% of the shares and the right to appoint executives. Rolf Hollander, chief executive since 2002, visited New York in 2005 to attract new investors. One of them was David Marcus of MarCap Investors, a hedge fund, who saw a firm with great potential. CeWe Color was still trying to squeeze as much as it could out of the dying film business, rather than going all out for digital. That would change, Mr Hollander promised in 2005.

But he has not moved fast enough for activist investors such as Mr Marcus (with a stake of 10.3%) and Guy Wyser-Pratte, an American raider (with a 5% stake). They had not met before the meeting in April but had a common cause: a vote of no confidence in Mr Hollander and the supervisory board.

The Oldenburgers closed ranks, even when Sebastian Freitag, a former supervisory-board member, produced evidence that the chairman and chief executive had plotted to depress the share price to bring in a friendly buyer. "Shut up," shouted the crowd. The mayor warned of "locust" investors. In the end the home team won, with 57% of the votes. CeWe Color reckons it is safe from the locusts for five years, though Lincoln Vale, another hedge fund, has just raised its stake to 3.2%.

Mr Marcus wants the company to succeed and grow, but he, Mr Wyser-Pratte and Mr Freitag feel they cannot ignore what they believe was a flagrant breach of the German securities law. "If they don't want to manage the firm properly they should take it private," says Mr Wyser-Pratte. Mr Hollander also faces a dilemma. He let in the barbarians, yet his firm has many other stakeholders, including the family and the 600 employees in Oldenburg.

Germany's securities watchdog and the state prosecutor are investigating alleged share-price manipulation; meanwhile, Mr Freitag's firm has been accused of "breach of verbal secrecy" in obtaining evidence. A legal fight looms. But Oldenburg cannot keep modern capitalism at bay forever. "The barbarians at the gate are sometimes wiser than the gatekeeper," says Mr Wyser-Pratte.

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BP

Some you win, some you lose

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The oil giant hopes to find gas in Libya, but may lose it in Russia

FOR an illustration of the roller-coaster that Western oil firms ride in their attempts to get at foreign oil and gas, look no further than BP. On May 29th the oil giant announced its return to Libya after an absence of over 30 years. Muammar Qaddafi, Libya's “Brother Leader”, who ordered the expropriation of BP's Libyan operations in 1974, is now allowing the firm to return to search for gas. At the same time another country in which BP operates is having second thoughts of a different sort. Earlier this week a Russian court ruled that it had no authority to review the licence terms for a gas field in which BP owns a share through its Russian joint-venture, TNK-BP. This paved the way for the Russian government to decide on June 1st whether to revoke the licence, and so deprive BP of a prized asset.

The Libyan deal, says BP's new boss, Tony Hayward, constitutes its biggest single investment in exploration. The firm will spend at least $900m, and perhaps as much as $1.2 billion, simply looking for gas. If it finds any, it might spend up to $800m appraising its discovery, and untold billions more developing it. Even if its Libyan venture is successful, however, BP may not make much money from it. The head of Libya's state-owned National Oil Corporation says it will receive some 78% of any gas produced. Another local partner will take another slice, leaving BP with less than 19%. The Libyan government has driven hard bargains with foreign oil firms, and BP is a relative late-comer.

In Russia, by contrast, BP was thought to be a trailblazer when it gained access to the country's huge and underexploited oil and gas reserves in 2003 through the creation of TNK-BP, in which it owns a 50% share. Vladimir Putin himself presided over the signing of the shareholder agreement. TNK-BP now accounts for roughly a quarter of BP's oil output, though only a tenth of its profits. Just as importantly, it consistently finds more oil than it pumps, which BP has struggled to do elsewhere.

But Mr Putin seems to have gone off foreign investment in energy. Last year, under duress, Royal Dutch Shell and its partners agreed to sell a majority stake in a big oil and gas project called Sakhalin II to Gazprom, the state-owned gas firm. Gazprom, which has a monopoly on gas exports, has also refused to build a pipeline through which a consortium led by TNK-BP could send gas to China from a field called Kovykta. With no other customers but the tiny local population, the consortium has not produced as much gas as stipulated by its licence, providing Russia's zealous inspectors with an excuse to pounce.

As *The Economist* went to press, the government seemed likely to order the confiscation of the field on June 1st. Even then, however, BP's Russian troubles will not necessarily be at an end. Rumours abound that Gazprom or Rosneft, the state-owned oil giant, might attempt to buy out the Russian oligarchs who own the other half of TNK-BP, or press BP to sell some of its shares. All the shareholders say their stakes are not for sale—but in Mr Putin's Russia, that is not a big obstacle.

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Health care

Storm in a test tube

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From The Economist print edition

The nascent genetic-testing industry is causing a stir

“THIS is the dawn of a new era!” declares Christopher McLeod, the boss of 454 Life Sciences, an American gene-sequencing firm. He is excited because his outfit has sequenced the genome of James Watson, the co-discoverer of the DNA double helix, and plans to reveal it to the world this week. “Project Jim”, as the firm calls it, has caused a stir. “This is a publicity stunt, and Watson is a narcissistic self-promoter,” sniffs Kari Stefansson, the boss of Decode, an Icelandic genetics firm. Mr McLeod, for his part, insists that this week's accomplishment serves as the starting gun for the race to make “the sequencing of individual genomes a reality”—and, in the process, open up a lucrative and controversial new industry.

Who is right? Mr Stefansson is correct that Project Jim is of little scientific or practical import. Even Richard Gibbs of Baylor College of Medicine in Texas, who worked on the sequencing, accepts that the project's cost of $1m-2m puts it well beyond the reach of the mass market today. Yet Mr McLeod has a point. Investor interest in genetic testing is growing. Google has just said that it is taking a stake in 23andMe, a genetics start-up co-founded by Anne Wojcicki, the wife of one of Google's founders. 454 Life Sciences itself was this week gobbled up by Roche, a Swiss drugs giant.

Genetic testing has a long history. Raju Kucherlapati of Harvard Medical School points out that prenatal genetic screening and genetic tests for sick children have been commonplace for two decades. What is new, he observes, is the boom in genetic tests for seemingly healthy adults. Some argue that such testing will prove a fad limited to the self-indulgent “worried well”, but Mr Kucherlapati believes that, in time, it will make possible cheaper, more personalised medical treatment. Firms are already starting to offer genetic tests that will help predict someone's likelihood of getting various diseases, and the probable effectiveness of potential therapies.

Technological advances are important, but so are innovative business models. A good example is the approach taken by Genomic Health, which sells a test that identifies a gene strongly correlated with breast cancer. Randy Scott, the firm's chairman, observes that unlike the hugely profitable markets for drugs or medical devices, diagnostic testing has traditionally been a sleepy, low-margin industry. So Genomic Health took a risk and marketed its test as if it were a medical device, justifying the high price ($3,500 per test) on the basis that more effective diagnosis and treatment costs less overall. It seems to be working: revenues this year will be around $60m.

Decode faced a similar difficulty in bringing its new genetic test for type II diabetes to market. Insurers will not usually reimburse patients for brand-new tests. So Dr Stefansson decided to launch the test last month using a novel two-pronged approach. His firm is distributing the test, which sells for about $500, in the usual way via doctors. But it has also chosen to sell directly to consumers through DNA Direct, an internet start-up. Ryan Phelan of DNA Direct says that direct sales help to reassure those who fear that the test results may be used to discriminate against them.

And that raises a far larger threat to the nascent industry. Technological hurdles and slow reimbursement can be overcome. The bigger worry, argues Michael Goldberg of Mohr Davidow Ventures, a Californian venture-capital firm, is over-regulation. Genetic tests are not regulated as tightly as drugs, but that may change. Laws compelling patients to share results with insurers could have a chilling effect. Conversely, proposed laws outlawing genetic discrimination could undermine the whole basis of medical insurance by enabling people at risk to buy cheap cover. Many fights loom on the road to the promised new era of personalised medicine.

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Luxury goods in India

Maharajahs in the shopping mall

May 31st 2007 | DELHI
From The Economist print edition

India's growing prosperity opens up a new market for luxury-goods firms

AP

A sign of the new India

Get article background

AT THE end of the 19th century, India's maharajahs discovered a Parisian designer called Louis Vuitton and flooded his small factory with orders for custom-made Rolls-Royce interiors, leather picnic hampers and modish polo-club bags. But after independence, when India's princes lost much of their wealth, the orders dried up. Then in 2002 LVMH, the world's largest luxury-goods group, made a triumphant return to India, opening a boutique in Delhi and another in Mumbai in 2004. Its target was the new breed of maharajah produced by India's liberalised economy: flush, flash, and growing in number.

Other purveyors of opulence followed, from Chanel to Bulgari. In recent months a multitude of swanky brands have announced plans to set up shop in India, including Dolce & Gabbana, Hermès, Jimmy Choo and Gucci. And Indian women will soon be invited to spend over $100 on bras made by La Perla, an Italian lingerie firm. Only a tiny fraction, of course, will do so. But it is India's future prospects that have excited the luxury behemoths.

India has fewer than 100,000 dollar millionaires among its one billion-plus population, according to American Express, a financial-services firm. It predicts that this number will grow by 12.8% a year for the next three years. The longer-term ascendance of India's middle class, meanwhile, has been charted by the McKinsey Global Institute, which predicts that average incomes will have tripled by 2025, lifting nearly 300m Indians out of poverty and causing the middle class to grow more than tenfold, to 583m.

Demand for all kinds of consumer products is about to surge, in short. And although restrictions on foreign investment prevent retail giants such as Wal-Mart and Tesco from entering India directly, different rules apply to companies that sell their own products under a single brand, as luxury-goods firms tend to. Since January 2006 they have been allowed to take up to 51% in Indian joint ventures. India is also an attractive market for luxury goods because, unlike China, it does not have a flourishing counterfeit industry. Credit is becoming more easily available. And later this year *Vogue*, a fashion magazine, will launch an Indian edition.

Barriers to growth remain, however. High import duties make luxury goods expensive. Rich Indians tend to travel widely and may simply buy elsewhere. Finding suitable retail space is also proving a headache. So far most designer boutiques are situated in five star hotels.

But things are changing. Later this year Emporio, a new luxury-goods mall, will open in a prosperous neighbourhood in the south of Delhi. It is likely to be the first of many. Even so, India could remain a difficult market to crack. Last October the Luxury Marketing Council, an international organisation of 675 luxury-goods firms, opened its India chapter. Its boss, Devyani Raman, described India's luxury-goods

market as “a cupboard full of beautiful clothes with a new outfit arriving every day—it could start to look messy without the right care”. This, she said, included everything from teaching shop assistants appropriate manners to instilling in the Indian public a proper understanding of the concept of luxury. “How do you educate them”, she asked, “about the difference between a designer bag that costs $400 and a much cheaper leather bag that functions perfectly well?”

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Luxury goods in China

If you've got it, don't flaunt it

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From The Economist print edition

The sale of luxury goods in China runs into political trouble

Get article background

THIS week China's second “Millionaire Fair” opens in Shanghai. Its 15,000 visitors will be offered everything from antique furniture and luxury cars to offshore banking and private jets. The organisers could not have picked a worse time. This month is also the second anniversary of the introduction of President Hu Jintao's plans to build a “harmonious society” by tackling inequality and bringing citizens closer together. High rollers showing off their diamond-encrusted mobile phones are not part of the plan.

There are signs that a clampdown is coming. Although the gulf between the rich and poor is smaller in China than in many other developing countries, it is growing fast. The 70,000 recorded cases of civil unrest in China last year were prompted in no small part by a growing sense of inequality.

This has led politicians to upbraid the nouveau riche, though so far only in small ways: chastising them for leaving too much food on their plates at banquets, for example. Such grumbling has mostly come from junior officials. But in recent months the complaints have grown louder. In March the prime minister, Wen Jiabao, railed against the building of flashy homes and criticised the use of land for golf courses. A few weeks later Xinhua, the government's official mouthpiece, warned that big spenders risked becoming “intoxicated with comfort” and sinking “into depravity”.

Last week the mayor of Beijing, Wang Qishan, went a stage further by calling for controls on outdoor advertisements that promote “luxury” or “ultra-distinguished” products, on the grounds that they “encourage luxury and self-indulgence, which are not conducive to harmony.” The Beijing Administration for Industry and Commerce, the local market regulator, added that “there is a problem with certain advertising not conforming to the demands of socialist spiritual civilisation.”

Local politicians proposed that advertisements should not focus on wealth and luxury. One even hinted that some billboards might be taken down on the pretext that they were poorly made and might fall and cause accidents. Luxury-goods firms may now have to devise ways to promote exclusivity without highlighting inequality—and become experts in billboard construction.

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Business strategy

Shall we play a game?

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Playing war games can give companies new perspectives on complex problems

WAR GAMES are commonly used by the military to evaluate strategies, explore scenarios and reveal unexpected weaknesses. American ships and aircraft have just begun two weeks of war games in the Gulf, prompting protests from Iran, and last week South Korea carried out an annual computerised war-game exercise.

Might war games deserve a greater role in business? Military analogies abound in the corporate world. Plenty of bosses look to Sun Tzu, an ancient Chinese general, for management tips. And in business, as in war, outcomes depend on what others do, as well as one's own actions. Yet many firms fail to think systematically about how rivals will react to their plans—and traditional planning does a poor job of taking competitors' responses into account, says John McDermott, head of strategy at Xerox, an office-equipment company. Corporate war games, which simulate the interactions of multiple actors in a market, provide a better way to do so.

Such games have two chief characteristics. First, players break into teams and take on the roles of fierce competitors (and sometimes other constituencies, such as customers). Second, the games involve several turns, allowing competitors not just to draw up their own strategies but to respond to the choices of others. Their popularity is rising. Booz Allen Hamilton (BAH), a consultancy, is running 100 war games a year, up from around 50 three years ago. Open Options, a Canadian strategy consultancy, has been going since 1996 and its revenue doubled last year.

Games can vary greatly in sophistication. Fuld & Company, a consultancy, recently ran a simple public game devoted to social-networking websites at the London Business School. Student teams took on the roles of YouTube, MySpace, Second Life and Facebook, and devised strategies that were judged by a panel of outside experts. Halfway through, organisers spiced things up with the announcement that Apple had entered the market with iTown, a fictitious online community for users of its iTunes music service. (If the game is an accurate guide to the future, MySpace is sitting pretty and Facebook is in trouble.)

BAH introduces a quantitative element into its games, calculating the effect of each team's strategy on their company's profits and stockmarket value at the end of each turn. Open Options takes the number-crunching further still. To help Xerox understand the market dynamics of the print and copy industry, it ran a one-day workshop in which teams from Xerox took the roles of the big companies in the market, itself included. Each team identified the things “their” company could do to change its strategy and drew up a list of its desired outcomes; these “preference trees” were shared with the other teams and fine-tuned. The results were then pumped into Open Options' proprietary software tools, which played out interactions between the companies and produced a range of possible outcomes.

Mr McDermott says the game's predictive power was astonishing: one forecast, that a company would start to acquire a certain group of assets within the industry, came true within six months. By shedding light on areas where companies have different priorities, the concept of preference trees helps to highlight potential trade-offs, as well as competition. Open Options charges North American clients roughly $100,000 for an engagement. “The bang for buck was outstanding,” says Mr McDermott.

The secret of successful war-gaming does not simply lie in mathematics, however. Interaction, not algebra, is the best way to win support for a new strategy. Game-players must be senior for the same reason—although having the top boss on a team can stifle feedback. Strategies also have to capture competitors' hard-to-quantify corporate cultures: when designing a game, BAH seeks out employees at its clients who have actually worked at competitors for that reason. But perhaps war games' greatest value lies in the way they encourage managers to think differently about the consequences of their actions. “To know your enemy, you must become your enemy,” as Sun Tzu would say.

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The media industry

Place your bets

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From The Economist print edition

A start-up hopes a stockmarket for media content will uncover new talent

GUT instinct plays too large a part in the publishing industry's decisions, says Mark Gompertz, vice-president of Touchstone, an imprint of Simon & Schuster, a publisher based in New York. So Touchstone is trying a new approach: a service concocted by Media Predict, a start-up based in New York. It uses the internet to obtain editorial feedback from a large number of volunteers in order to help executives decide which manuscripts should become books.

Media Predict hopes to do this using a virtual stockmarket for unpublished books, unsigned music acts and proposed television shows. It opened last week at mediapredict.com. Artists or their agents post samples of their work (a book chapter, say, or a television pilot). Traders armed with a free wad of virtual cash buy shares in the material they feel has the greatest potential. The idea is that as traders buy and sell shares in competing content, the cream will float to the top—where entertainment-industry bosses can skim it off. In September Touchstone plans to choose one or more of the top 50 book manuscripts on offer for publication.

Show business may gain even more than publishing does. Entertainment's bias toward personal contacts stifles the emergence of new talent; test audiences often suffer from a herd mentality, as silent majorities are pulled along by vocal “alpha” members; and monitoring the online popularity of material to forecast market profitability is perilous. Gimmicks and humour tend to circulate fast on the web, but may fail to move the masses once a price tag is attached. “Snakes on a Plane” was a web sensation, but a box-office flop.

By contrast, prediction markets can be remarkably accurate, particularly for elections. In opinion polls, each respondent reveals one vote intention. But in an election-prediction market, traders buy and sell stock in candidates based on who they think will win, rather than whom they want to win.

For the moment, access to mediapredict.com is free. Once the number of traders becomes statistically significant, companies that use the virtual market to improve their decision-making will pay a fee. “This year was kind of a bloodbath for new [television] programmes,” says Brent Stinski, Media Predict's founder, “so we know that their systems need improving.” Advertising could provide another source of revenue. But laws against online gambling will probably foil Mr Stinski's hopes of turning the exchange into a real-money stockmarket. Traders will probably have to settle for prizes, which will be introduced later this year, and the warm glow that comes from knowing that they are the secret arbiters of public taste.

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Face value

Health-care heretic

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From The Economist print edition

John Soares

Regina Herzlinger is trying to transform America's health-care system through her advocacy of consumer choice

ONE recent evening in Boston, Regina Herzlinger was teaching a class on the business of health care in America, taking her students through the travails of a medical-device manufacturer that had failed to get its invention onto the market. The group considered the company's financial position, the economics of the market niche and other factors that foiled its strategy. All this may seem unremarkable given that Mrs Herzlinger is a professor at Harvard Business School (HBS). What is surprising is that the classroom was filled with students from Harvard's medical school, not its MBA programme. Aspiring doctors are not normally taught microeconomics, cost accounting or risk management. But under a scheme dreamt up by Mrs Herzlinger and others, Harvard now offers joint degrees from the two schools. Arming doctors with the commonsense tools of economics is a tactic in a long-running campaign to fix America's health system.

Mrs Herzlinger is America's leading advocate of market-driven, consumer-orientated health reform. In the 1980s, says Ray Gilmartin, a former chairman of Merck, a drugs giant, “she argued for a greater role for competition and choice when market forces and productivity were foreign concepts in this sector.” In the 1990s, when “managed care” was all the rage, she predicted correctly that such a dirigiste, cost-obsessed approach would alienate consumers even as it failed to rein in cost inflation (“I said, ‘this fish stinks’,” she recalls).

Now comes her latest salvo. “The US health-care system is in the midst of a ferocious war. Four armies are battling to gain control: the health insurers, hospitals, government and doctors,” she writes at the start of her new book, “Who Killed Health Care?”. Then she moves in for the kill: “Yet you and I, the people who use the health system and who pay for all of it, are not even combatants.” She wants a national system which requires individuals to buy health insurance, with help in the form of tax breaks for all punters, and subsidies for the poorest. She wants insurance prices to be risk-adjusted and hospitals to be free to charge what they like so they can offer new services as the market demands. Most importantly, she wants the government to demand transparency of price and quality from this notoriously murky industry. “I'm not just an academic, I am an activist,” she insists.

Mrs Herzlinger's suspicion of industry and government and her vigorously consumerist stance are the results of personal experience. When she did her doctoral research on medical-cost accounting at Massachusetts General, a giant Boston hospital, its boss was astonished that she could tell him how much a particular treatment at his hospital actually cost. After graduation she worked in the health department of the state of Massachusetts, and says she saw first-hand how clever, well-intentioned people could become trapped in an overbearing, inefficient system. And she faced many obstacles on the

way to becoming the first tenured woman and holder of a faculty chair at HBS. “Because I was never part of the old boys' network, I had to look outside for allies—to my students, whom I see as my consumers, and to the wider world outside academia,” she says.

Mrs Herzlinger's vision of consumer empowerment faces formidable obstacles, of course, both from defenders of managed care and from supporters of alternative paths to reform. Alain Enthoven, a professor at Stanford University who was the intellectual force behind managed care, dismisses her consumer-directed approach as “great for the healthy and wealthy” but warns that it may “draw more resources into the open-ended fee-for-service sector, whose appetite is insatiable.” Marcia Angell, a former editor-in-chief of the *New England Journal of Medicine*, argues instead for a single-payer system, insisting that “private insurers compete not by offering better health care, but by avoiding high-risk individuals, limiting services for those they do cover, and, whenever possible, shifting costs.”

Step by step

Even so, it seems that Mrs Herzlinger's once-heretical ideas are making progress. She has advised the Bush administration and members of Congress on recent consumer-minded reforms, such as personal “health savings accounts” and changes to the Medicare health scheme, though she rightly grumbles that these fixes have not yet gone nearly far enough. As health-care reform hots up, she is fielding calls from politicians from both parties. Paul Ryan, a Republican congressman, claims that “of all the thinkers on this topic, Regi has the most influence in Washington—and her ideas are gaining ground.” She also has the ear of senior figures in the health-care industry. Ron Williams, the boss of Aetna, an insurance giant, says Mrs Herzlinger's consumer-driven approach is “the most important trend to hit health care—and Regi is a beacon for us practitioners.”

But her most important asset may well prove to be her HBS students. Three decades' worth are now in the marketplace, and they are starting to make their presence felt. Larry Gelb, who took her course in 1986 and recalls her being a “breath of fresh air”, now runs CareCounsel, a consumer-advocacy firm that represents individuals in legal tussles with health-insurance firms. Other protégés have founded companies to develop her ideas on data transparency, personal financial-management and “focused factories” dedicated to treating particular ailments.

Mrs Herzlinger notes that managed care went from an idea to nationwide practice in just four years, and predicts that consumer-driven health care with universal coverage (Switzerland's approach is her favoured model) will sweep America over the next four years. And it will happen, she is convinced, as consumers demand better from their health system. She is optimistic, she says, because the people making such demands will be America's baby-boomers—“the most manipulative, self-seeking and effective generation that this country has ever seen.”

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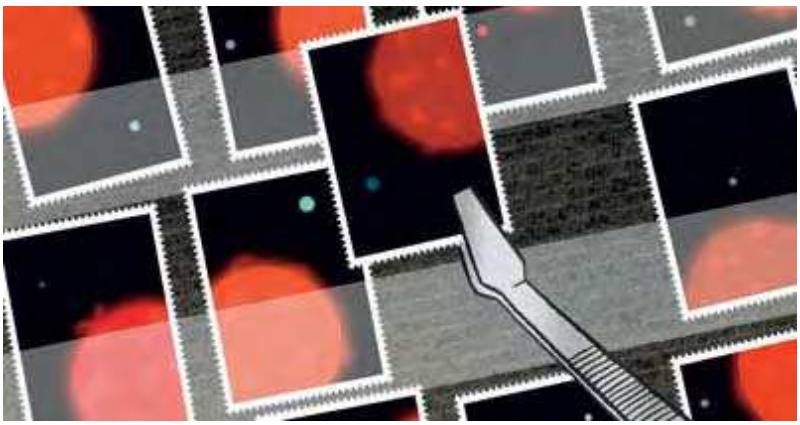
Exoplanets

The planet hunters

May 31st 2007
From The Economist print edition



The search for alien life is yielding weird new worlds at a remarkable rate

EARLY science is a lot like stamp collecting. In any new field of endeavour, the first priority is to gather lots of specimens. In planetary science the result is a menagerie of exotic new worlds, some 236 of which were this week confirmed as exoplanets—that is, planets outside the solar system. Over the past few days members of the American Astronomical Society meeting in Honolulu have also been tussling over whether the first Earth-like planet, announced at the end of April, has actually been found.

The rate of progress is extraordinary. The first exoplanet orbiting a normal star was discovered a mere 12 years ago. Before that, the answer to the rhetorical question “are we alone?”, might quite possibly have been “yes”. Exoplanets were the stuff of science fiction. Now the hunt is well and truly on for places that are capable of sustaining life, and in some ways the speculations of the sci-fi writers have been far outstripped by reality.

The main rivals in the exoplanet race are a team led by Geoff Marcy of the University of California, Berkeley, and another led by Michel Mayor of the University of Geneva. Overall, the Americans have detected more planets, clocking them up at an impressive rate of three a month for the past year. But the Swiss have had some notable triumphs. Indeed, it was they who started the whole thing off 12 years ago. It was also they who announced the Earth-like planet—meaning, in this context, that they think it is both rocky and capable of harbouring liquid water.

If their interpretation is confirmed, it would be a real coup. For, as the meeting heard, bagging exoplanets is a game with a natural bias that tends to yield exactly the opposite of Earth-like planets.

Spatial prejudice

The reasons for this bias are varied, but they have a common underlying cause. Compared with the stars they orbit, exoplanets are faint and difficult to spot directly. Hence astronomers mostly infer their existence by looking for their effects.

The first type of bias is that the stars which reveal their planets most readily are smaller than the sun. The commonest way of finding a planet is to look for a star that wobbles. The most probable cause of such wobbles is that the star in question has a planet or two tugging at it. Such playground altercations are most readily noticed when a star is small. Though the sun is not a particularly large star, the wobble-detecting technique works best with stars that are even smaller.

The second source of bias is the opposite of the small-star effect. Large planets create more wobble than

small ones do. By “large”, planet hunters mean not just bigger than the Earth, but bigger than Jupiter, which is 318 times more massive than Earth. That is very big indeed.

The third cause of bias is that easily detected planets tend to be close to their stars. This is partly because the closer they are, the more wobble they induce, and partly because, to be certain that they are looking at a new exoplanet, planet hunters want to see two complete orbits. A planet's orbital period depends on its distance from its star. Jupiter, for example, takes 12 years to orbit the sun and would thus require the best part of a quarter of a century to be detected to an astronomer's satisfaction.

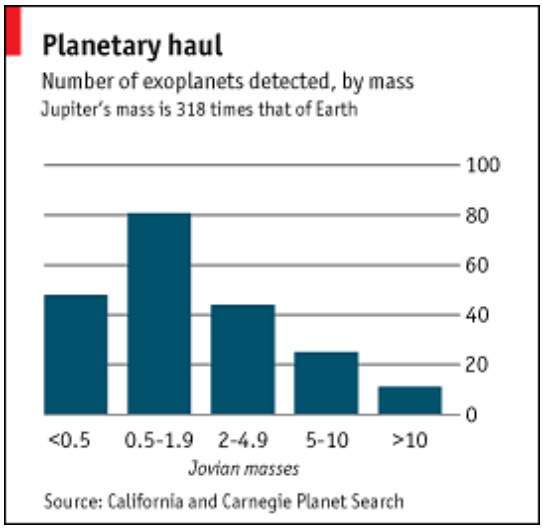
There is also a fourth cause of bias, although it favours stars that are like the sun, at least in age (the sun is about 4.5 billion years old). Like a teenager, an adolescent star—one that is a mere billion years or so old—is volatile. It spits fire that prevents astronomers from making observations of what is happening around it. Researchers therefore concentrate their efforts on seeing the offspring of calmer, more sedate stars that are that little bit older.

This explains why red dwarfs are popular terrain for planet hunters. They are smaller than the sun (typically weighing between a tenth and a half of its mass) and, because they burn at lower temperatures, they last a long time and are often very old. Unfortunately for those seeking little green men, their coolness means that their “habitable zones” (where the temperature is right for liquid water to exist) are much nearer to the star than the Earth is to the sun. And that, in turn, means planets in this region are likely to be tidally locked, as the moon is to the Earth, and show the same face to the star at all times. This makes it hard for a planet to develop an atmosphere.

The upshot is that almost all of the worlds found so far are hot, mammoth orbs that rapidly revolve around stars smaller and darker than the sun. They are thus quite unlike the planets of the solar system—and only one of those, namely Earth, is known to be hospitable to life.

Collector's items

Planetary taxonomy is straining to accommodate the new worlds. The distinction between different types of planet has already been broadened so that the solar system is now thought to contain three, rather than two, types. The innermost—Mercury, Venus, Earth and Mars—are rocky. Then come the gas giants, Jupiter and Saturn. Uranus and Neptune are also gas giants, in that they have no visible solid surface, but they now tend to be classified as a subgroup of “ice giants” that contain water in its solid form. Small, icy objects such as Pluto are no longer regarded as planets, but in any case, they would be undetectable around another star. Most of the exoplanets detected to date are gas giants. Many are far more massive than Jupiter (see chart).



Then there is a question of whether particularly massive planets are really stars that failed to ignite. One school of thought says that if an exoplanet has a mass more than 13 times that of Jupiter, it is not a real planet, but rather a brown dwarf. That is because it is capable, in theory, of sustaining the nuclear fusion which would transform it into a star. If so, then some of the most massive exoplanets found to date might better be classified as failed stars.

One of the most interesting taxonomic discoveries so far was announced two weeks ago by Michael Gillon, a member of the Swiss team who works at Liège University in Belgium. Dr Gillon was looking at an exoplanet circling a red dwarf called Gliese 436. This had been found by the American team using the stellar-wobble method. However, Dr Gillon suspected that, viewed from Earth, this planet's orbit might cross the disc of its parent star, a phenomenon known as transiting. Transits of exoplanets are rare. Even among those that tightly circle their parent star, only 10% would be expected to transit in the Earth's line of sight. For those that orbit their stars at the distance of the Earth from the sun, that figure falls to less than 1%. Dr Gillon, however, was fortunate. The planet in question is closer to its star than Mercury is to the sun—and it fell within the lucky 10%.

By measuring the resultant dip in Gliese 436's light, Dr Gillon was able to calculate the exoplanet's diameter. Knowing both its size and its mass, he was then able to calculate its density, and thus make a

plausible guess about its composition. The orb in question would appear to be made, in part, of ice. That would classify it as an ice giant somewhat similar to Neptune. It probably has a rocky core surrounded by water and this water may—physicists are unsure about the behaviour of water in such extreme conditions—be in the form of hot ice. The pressure of being at the centre of a planet would, in other words, have compensated for the temperature caused by being so close to a star.

It is the rocky planets, though, that excite most public interest. The one that the Swiss team thinks it has discovered is in orbit around a star called Gliese 581, some 20 light years from Earth. Unfortunately, astronomers do not yet know if its orbit transits Gliese 581's disc, as viewed from Earth. This means it may be impossible to discover its composition in the way that Dr Gillon did with the planet of Gliese 436. The team think it is rocky because it weighs only five times as much as Earth—too little for a gas giant. The exoplanet may also lie in the habitable zone of the red dwarf that it orbits.

Detecting more such rocky exoplanets is the aim of a European spacecraft called COROT that was launched in December 2006. It is searching for exoplanets that transit their parent stars, as seen from 900km above Earth. The mission's designers believe that the camera aboard COROT is sensitive enough to detect not merely transiting gas giants, but also rocky planets that are the size of Earth. The spacecraft is also probing the interiors of stars by studying starquakes on their surfaces—in much the same way that geologists learn about the Earth's interior by studying earthquakes. Astroseismology, as this science is known, may allow astronomers to get a better idea of the ages of stars that are found to host exoplanets. Given that exoplanets are thought to be formed soon after the birth of a star (see article), knowing the age of the parent would date the offspring, too.

America's space agency, NASA, also has plans to launch a dedicated rocky-planet hunter. The *Kepler* mission is similar to *COROT*, but will be more sensitive. Moreover, it will be placed in an orbit better suited to locating its quarry. The European mission is hampered by its low orbit: the Earth, the moon and the sun periodically obscure its view. *Kepler* will not suffer that indignity, because it will be placed in orbit around the sun, trailing behind the Earth. If all goes well, the spacecraft should be launched early in 2009.

Whether the rocky exoplanets bagged by these missions are able to support life will depend on whether they have atmospheres. Detecting such ethereal breaths has only just come within the grasp of mankind. Earlier this year two space-based telescopes, *Hubble* and *Spitzer*, were both used to probe exoplanet atmospheres. *Hubble* saw how the upper atmosphere of a scorched gas giant closely orbiting its parent star was bleeding into space. *Spitzer*, meanwhile, found a surprising lack of water in the atmospheres of two other gas giants.

To examine an alien planet's atmosphere, the planet concerned must transit its parent star in the line of sight from Earth. Starlight contains the signatures of the chemical elements that compose a star. When an exoplanet passes in front of that star, its atmosphere adds further chemical signatures. By subtracting the signals from the star from those of the combined system, it is possible to identify which gases are present in the planet's atmosphere.

Without an atmosphere, all water on Earth would be frozen. Whether there could be life on the Swiss team's rocky planet depends very much on whether it has an atmosphere beneath which water could exist in its liquid form. Some calculations suggest this is unlikely, and that any water on the planet would be steam.

A rocky future

Two further missions are planned to search for signs of life in the new haul of rocky planets that is expected to be found in the coming months and years. America's *Terrestrial Planet Finder* and Europe's *Darwin* are still on the drawing board, but astronomers would like to use them to identify “biomarkers” such as oxygen in the atmospheres of exoplanets.

To inform this work, Lisa Kaltenegger of Harvard University and her colleagues have been assessing what the Earth's atmosphere would have looked like over the past 4.5 billion years. The idea is that planet hunters will be able to spot planets that have the potential to develop life, even if life does not yet exist there.

The researchers assume that 60% of the Earth's surface was shrouded by cloud at any given time in its history. Throughout that history, about 70% of the surface has been covered by oceans and 30% by land. Initially, the land was mostly rock and ice. This slowly altered to today's picture as vegetation emerged. Some 30% of the land is now covered by grass and another 30% by trees. Naked rock accounts for 18%, snow covers 15% and sand another 7%.

By tracing the way they think life developed on Earth against this background, Dr Kaltenegger and her colleagues have come up with a model of how the composition of the planet's atmosphere ebbed and flowed with the rise of various classes of organism. They reckon it has always contained a lot of nitrogen, but that early carbon dioxide was mopped up by the formation of limestone while methane levels rose as a result of the exhalations of a group of bugs—then common, now rare—called methanogens. Eventually, photosynthesis arrived in the form of cyanobacteria. Their exhalations, oxygen, did for both methanogens and methane and created an atmosphere similar to the one that exists now.

The main upshot is that although oxygen is unquestionably a biomarker (it is so reactive that it would vanish from any atmosphere unless constantly replenished) methane may be one, too. Which is awkward, as methane is found in atmospheres, such as that of Saturn's moon Titan, where life is not thought to be present.

Another biomarker might be a planet's colour. Chlorophyll, the chemical that controls photosynthesis, is green for a reason. It is tuned to the spectrum of the sun in order to absorb sunlight in the most efficient way possible. The reflected green is the light it rejects. That calculation could be made for any star, and the best colour for a chlorophyll equivalent worked out. Perhaps if the exoplanet under investigation were orbiting a dwarf star, the little green men—or, at least the vegetation they eat—might turn out to be orange.

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Planet formation

When worlds collide

May 31st 2007
From The Economist print edition

Theories of how dust and ice become home

STELLAR and planetary nurseries are private places. Unfortunately for science, the nearest young stars that could be producing planets are so far away that conventional telescopes are unable to discern what is in the cradle. Moreover, such births are shrouded in swirling discs of dust that normally prevent the curious from taking a peek at the new-born. But one astronomer has just done precisely that.

Joshua Eisner of the University of California, Berkeley, trained his attention on a star a mere 6m years old. It goes by the name of MWC 480 and lies some 450 light years away in the constellation Taurus. By combining the light-gathering power of two telescopes on the summit of Mauna Kea, in Hawaii, Dr Eisner was able to create, in effect, a giant telescope.

The discs surrounding stars consist mostly of hydrogen, but they also contain small quantities of dust and ice. Hitherto, it was thought that dust, ice and gas were thoroughly mixed together in these discs.

As Dr Eisner reports in this week's *Nature*, however, by focusing his combined telescopes on the region of the disc close to MWC 480—in other words, the part corresponding to where the Earth formed round the sun—he was able to see distinct zones within the disc. He saw that the constituent parts were being separated, with hydrogen gas falling into the star while water vapour remained farther out and the dust was farther out still.

This discovery could help to explain how water comes to be incorporated into rocky planets such as the Earth. It could also help illuminate how giant, gaseous exoplanets often come to orbit their parent stars so closely.

The dominant theory of planetary formation argues that each system started out as a cloud of debris orbiting a star. Within the cloud, some parts are sufficiently dense to start collapsing under their own gravity. Specks form into clumps, these collide with other clumps, and the process continues until all the matter in any given orbit is concentrated into one object—a planet. Rocky planets would form nearest the parent star, with gas giants farther out.

The problem is that most of the exoplanets detected to date, being gas giants, are too close to their stars to have been born there. Astronomers think they must have migrated in from the outer reaches. But having started to spiral inwards, why have they then stopped?

Dr Eisner argues that the separation of material in the protoplanetary disc indicates that something—possibly the star's magnetic field—is holding some forms of matter away from the surface. He thinks exoplanets are pulled towards the star by the dust and that when the dust runs out, the exoplanets stop moving. Mother, it would appear, has ways of holding her offspring at arm's length.

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Rating agencies

Measuring the measurers

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From The Economist print edition

Getty Images

Credit rating could do with more competition, and a bit more rigour

IF YOUR biggest shareholder is Berkshire Hathaway, the chances are you are a firm with a future. Moody's, a rating agency in which Warren Buffett's investment company owns a 17% stake, is certainly in fine fettle. Its operating margin last year was 54%; revenue is growing at close to 20% a year. This is thanks largely to the explosion in issuance of “structured finance” products: bonds backed by mortgages, car loans and the like, as well as the derivatives linked to them. Rating these products now accounts for almost half of the firm's business. The other giant of the industry, Standard & Poor's (S&P), is also in rude health. It has helped to drive its parent company's shares up by more than 30% in the past year.

Moody's and S&P have a combined market share of 80%. Together with Fitch, the number three, they have over 95%. This concentration has long raised questions about competition—and regulators are, at long last, on the case. On May 23rd America's Securities and Exchange Commission (SEC), prompted by Congress, voted to help new agencies gain faster approval. Only half a dozen companies have made the grade since the approvals system began in 1975. Toronto-based Dominion Bond Rating Service had to wait 13 years.

Glenn Reynolds, head of CreditSights, a research firm, says it is time the barriers fell. The big rating agencies are “as close to Shangri-La as you can get, at Microsoft-plus margins,” he says. They wield great power—a downgrade can tip a company into bankruptcy—but lack accountability. After crises, such as Enron's collapse, they have deflected legal assaults by claiming their ratings were “opinions”, constitutionally protected as free speech. That stance may be harder to defend next time.

Even if the SEC is serious about promoting competition, it may not succeed. Many firms that sell bonds are content to stick with Moody's and S&P, rather as buyers of technology once felt safe choosing IBM. And many funds have charters stipulating that their investments be rated by one of the big two. Steve Joynt, Fitch's boss, says he has had to work hard to get firms to change their guidelines.

This leaves some wondering if credit ratings are a natural oligopoly, with new entrants offering a level of choice that investors simply do not want.

Quis custodiet ipsos custodes?

The big agencies bill the issuer, not the investor. This leaves them conflicted, say critics, as they have an

incentive to give the issuer-client the rating it wants so as to win repeat business. Investigations have been launched into whether downgrades of American utilities by Moody's, S&P and Fitch were influenced by the companies, which may have been seeking lower ratings to justify price rises. The agencies say they let clients see their reports before they are published, but only to root out factual errors or non-public information.

The biggest concern is structured finance, where the agencies now depend on a few large investment banks for much of their revenue. A recent study found that the two now work so closely together on complex products such as collateralised debt obligations (CDOs)—tranched pools of debt from different sources—that the agencies could be seen as helping to underwrite them. This may expose them to lawsuits from disgruntled investors. It is an area being studied by IOSCO, an association of securities regulators.

The other question is whether the rating agencies are up to the task. Structured issuance ballooned to $2 trillion last year and grew in complexity. The agencies may be struggling to keep up—partly because they are losing some of their best people to investment banks. The banks offer recruits princely sums to reveal how to “pierce the armour of the computer models they themselves created”, says one observer.

Add to that the weaknesses of the models. Janet Tavakoli, a consultant, believes that standards have slipped as business has boomed. In subprime lending, she says, the models misread the level of correlation between different types of assets—a crucial variable—and ignored signs that risks were greater than historical data suggested. Securitised assets using this flawed methodology were used as collateral in other deals, compounding the error. It is hardly a good sign that most hedge funds pay little attention to ratings, assuming their own models to be better. Even Mr Buffett, as happy as he must be with his investment in Moody's, crunches his own numbers when using derivatives.

The agencies have been shifting their ground, downgrading mortgage-backed bonds by the dozen and promising to keep a close eye on CDOs. But they rebut allegations that they messed up. Brian Clarkson, head of structured finance at Moody's, says that much criticism is based on the misunderstanding that ratings gauge the risk of trading losses, when in fact they look only at the probability of default.

Yield-hungry investors have failed to heed repeated warnings by the rating agencies: “We've published reams of reports, but no one reads them until something happens,” says Mr Clarkson. Martin Fridson, a credit analyst, argues that the agencies are often used as scapegoats.

Politicians and state attorneys-general want someone to blame, too. They may soon have more ammunition. Joseph Mason, co-author of the critical study on structured ratings, thinks losses on recently assembled CDOs could top $100 billion. That would hurt pension funds, which bought them, and send congressional leaders into a spin. Worse for the industry, widespread losses might cool the fervour for structured products, which command much higher fees than corporate ratings do.

But if the Jeremiahs are wrong and volumes hold up, Moody's and S&P can expect more handsome returns. It would take the entry of a Bloomberg or a Thomson-Reuters to stir up real competition, but neither is thought to be preparing an assault. So for the moment the incumbents' dominance is likely to remain, as Ms Tavakoli says, a “gift that just keeps giving.”

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Buttonwood

Who's the patsy?

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From The Economist print edition

The winners and losers from hedge funds and private equity

Get article background

"IF you've been in the [poker] game for 30 minutes and you don't know who the patsy is," said Warren Buffett, "you're the patsy". As the world watches hedge-fund and private-equity managers build up billion dollar fortunes, many people are wondering where all this money is coming from. In short, who is the patsy?

To a left-wing politician, the answer is obvious: the ordinary worker. Financial speculators and corporate raiders force companies into short-term decisions, which increase share prices by holding down wages, sacking workers or skimping on capital expenditure.

To a free-market enthusiast, the question might seem misguided. There need be no patsy, because the economy is not a zero-sum game. Private-equity and hedge-fund managers improve economic welfare by allocating capital more efficiently.

But even if such people create wealth, they may create losers too. After all, even though the growth of trade is a blessing all things considered, some people might suffer as it happens. In fact, economic progress hardly ever succeeds in making some people better off, without also making someone else worse off.

Take Peter Wood, the British entrepreneur who created the Direct Line insurance group in the 1980s. Telephone-based insurance was undoubtedly more efficient. And British drivers, who saw their premiums slashed, probably did not begrudge sharing their gains with Mr Wood, who became fabulously wealthy. But the innovation also created losers: the insurance salesmen who used to operate from offices all around the country.

Private-equity funds profit by arbitraging between private and public markets, exploiting their different attitudes towards debt for example. In 1989, Michael Jensen of the Harvard Business School argued that the owners and managers of quoted companies were doomed to squabble over cashflow. "The pressure on management to waste cash flow through organisational slack or investment in unsound projects is often irresistible."

By gearing up companies, private-equity groups withdraw managers' freedom to decide what to do with cashflow. In theory, this maximises the value of the firm. The losers are the shareholders of public companies who miss out on these gains by selling too early. Shareholders are suspicious of too much debt on the balance sheet, perhaps because heavily geared firms have more volatile profits.

Indeed, shareholders such as pension funds and insurance companies may be the patsies in another way. They are reallocating assets from public markets to "alternative assets", including private equity. So they end up owning stakes in the same underlying businesses, but paying higher fees for doing so.

Hedge funds are equally controversial. Arguably, they improve economies in two big ways. They provide liquidity to markets, thanks to their high trading volumes. Other things being equal, the more liquid a market, the lower the cost of capital. Second, they act as financial-risk insurers. Just as entrepreneurs are happier to set up businesses if they know they can protect themselves against fire and theft, so they are more willing to establish companies if they can protect themselves against interest-rate and currency moves.

Credit derivatives, for example, allow investors to separate the risk of default from other risks, such as interest-rate movements. Among the beneficiaries are companies that issue investment-grade debt. These firms have traditionally faced interest rates that seem unjustifiably high given their low risk of default. The

advent of credit derivatives seems to have forced down these premiums.

In this case, the patsies are other financial institutions. The big banks have lost out now that companies no longer depend on them to offer hedges on interest-rate and currency movements. The banks can easily cope with the loss, since hedge funds are such huge money-spinners for their prime broking arms.

The hotshots who run hedge funds also have some skill to offer, academic research suggests. But thanks to performance fees, they keep most of the benefits of their abilities. So the patsies are those investors who pick the below-average managers. The same is probably true in the world of private equity, except that it is easier to spot the best-performing managers in advance. Even so, investors who are desperate to diversify may end up giving money to the poorer performers in the hope they will improve.

When they contemplate their portfolios in a few years' time, such investors may regret their decisions. But at least they can bask in the knowledge that the global economy is the better for their folly.

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ABN AMRO

Braveheart two

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A Scottish bank takes another swig of Dutch courage

THE battle for ABN AMRO may result in the biggest takeover in banking history. It may also be one of the most complicated. On May 29th a consortium led by Royal Bank of Scotland (RBS) sweetened its bid for the big Dutch bank, offering 79% cash and a bit more clarity about how the three co-bidders would carve it up.

The consortium's offer, which now totals €71.1 billion ($95.5 billion), is about 11% more than a rival, solo bid from Barclays, a British bank. Less generous, the Barclays bid would also be much simpler, were it not stymied over a side-deal: the sale of LaSalle, ABN AMRO's Chicago subsidiary, to Bank of America. The Dutch Supreme Court must decide, probably next month, whether the sale can go ahead without a vote by ABN AMRO shareholders.

Ideally, RBS would like LaSalle for itself, as well as ABN AMRO's global wholesale and markets business. The rest of the group would be split between its two co-bidders: Fortis, a Belgian/Dutch group, and Spain's Banco Santander. Fortis would take over ABN AMRO's commercial and retail business in the Netherlands. The Spaniards meanwhile would get Banco Real in Brazil and Antonveneta in Italy, where they already have a presence.

Taking over a banking group sprawled over 53 countries is hard enough. Splitting its businesses three ways is an even bigger task. ABN AMRO, for example, is counterparty to derivatives worth an estimated €10 trillion in notional principal. Problems might arise were this portfolio to be moved from the Dutch-regulated entity to one regulated by Spain or Britain. According to RBS, ABN AMRO would continue to be a Dutch-regulated counterparty for as long as necessary. RBS would be answerable to the regulator until the Dutch and other watchdogs were comfortable with the consortium members taking over their shares of the business. Big and medium-sized customers would be divvied up in the Netherlands between RBS and Fortis, according to ABN AMRO's own classification drawn up in December 2005, RBS said.

Both Barclays and RBS have done this sort of thing before. Barclays stepped in for DFC, a bankrupt New Zealand mortgage bank in 1989, replacing it as a counterparty for all its interest-rate swaps. RBS successfully took over the books of NatWest, a bank bigger than itself, in 2000.

But other banks have fared less well. Dresdner Bank, for example, once tried to prepare Dresdner Kleinwort Wasserstein, its investment bank, for sale. It estimated that sorting out its ties to corporate customers would take 18 months to two years. The project was shelved.

For the moment, the takeover battle is finely poised. The RBS consortium has made the richer offer, but some of that premium may go to pay off Bank of America if LaSalle is not sold. There is little doubt that Barclays could pay for and execute its offer, with little damage to its credit rating.

There is less certainty about the consortium bid, even if the RBS spin-doctors have ready answers for each open question. Fortis must raise €15 billion in new equity and €8 billion through asset sales; Santander needs to raise up to €10 billion in new equity. Merrill Lynch, an investment bank advising the consortium, is lead underwriter for these share issues but there is no commitment yet on price. On May 30th Moody's, a rating agency, put RBS on a negative rating-watch, citing possible execution risk and the bank's relatively weak capital base.

These uncertainties may not be enough in themselves to scupper a deal, but there is a risk that regulators will discriminate against the RBS offer on the grounds of complexity. That would be a pity. If you are impatient to see Europe's banks carved up, sold and consolidated, the RBS approach is more exciting. Whether that is what a majority of shareholders would want is another matter.

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Hedge funds

Hedge fundraising

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From The Economist print edition

The new moneymen give some back

Get article background

“PEOPLE always say hedge funds charge an arm and a leg. We make sure we give that back.” Chris Heasman of Lazards was speaking at a recent rock concert helping to raise money for A Leg To Stand On (ALTSO), a charity that provides children in the developing world with prosthetic limbs. His words may have been in rather dubious taste. But they sum up a growing philanthropic trend in the wealthy sector.

Mr Heasman was playing in “The Subscribers”, one of five amateur bands performing at London's Café De Paris last month. ALTSO was the brain-child of Mead Welles, an American fund manager who came up with the idea when travelling through Asia. By chance, the father of one of Mr Welles's college friends was a prominent orthopaedic surgeon. Through him, Mr Welles discovered that the cost of providing a limb (around $250 on average) was too great for many poor families in countries like India to be able to afford.

Hedge-fund managers seem to be following the well-trodden charitable trail blazed by 19th-century industrialists such as Andrew Carnegie and modern-day billionaires like Bill Gates. Perhaps, given their image as rapacious capitalists, there may be a touch of calculation about their efforts. But the recipients of their largesse are unlikely to care if the donors are motivated by altruism, public relations or a guilty conscience.

In Europe the best-known hedge-fund charity is ARK (Absolute Return for Kids). Established in 2002, it provides AIDS treatment in Africa, helps children escape from abusive orphanages in eastern Europe and finances education in Britain. ARK raised a remarkable $53m at this year's gala dinner, which included a speech by Bill Clinton, a fundraising appeal by Madonna and music by Prince. In America the Robin Hood Foundation, founded by Paul Tudor Jones, a commodity manager, has already distributed more than $500m from the rich to New York City's poor.

ALTSO's efforts were somewhat modest by comparison, with around $120,000 raised on the night. The audience, a rather awkward-looking bunch of men in suits eating canapés, was treated not to Prince, but to a collection of standards by bands with names like The Hypothecators and The Systematics. But the band members were at least able to indulge in some teenage wish-fulfilment. As Brad Cole, one manager-turned-musician, said: “It hits a lot of numbers. It's a little bit of work, a little bit of fun and it's charitable.”

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Chinese bankruptcy

Euthanasia for companies

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China's troubled businesses can now legally go bust

Get article background

THERE is a good chance that on June 1st, shortly after *The Economist* goes to press, at least one Chinese company will declare bankruptcy, or have bankruptcy thrust upon it. In most economies such an announcement would be cause for alarm. In China it is something of a triumph. After over a decade of contentious debate, China has finally enacted a law that allows worthless private companies to die.

Capitalism without bankruptcy is like Christianity without hell, observed Frank Borman, who watched the American airline he had once run go deservedly bust in the 1980s. Liquidations are not as nasty as they sound: assets that would otherwise be locked up in endless disputes can be recycled and put back to work. They can also reveal lies: because many Chinese companies are functionally dead but legally alive, their debts remain as receivables on the balance sheets of other Chinese companies, creating an accounting nightmare.

Euthanasia may first claim the true basket cases, for which the risks of testing a new law are justified by the impossibility of otherwise sorting out claims. These fatalities may pass without a stir. Later cases, though, may get contentious.

The very notion of bankruptcy—of breaking financial commitments—is touchy in China. Debt obligations were traditionally passed from father to son. An early legislative attempt to break this chain was enacted at the beginning of the last century and then hastily repudiated. Under communism, the idea of bankruptcy was troubling because everything, from assets to employee welfare, was in the state's hands.

In 1986 a law was passed for state-owned companies, allowing only their government supervisor to put them into bankruptcy. First claim to any remaining assets belonged to the workers. No explicit provisions existed for private companies. Defaults were worked out in the light of conflicting provisions of contract law and rules put out by government agencies, says Helena Huang, a bankruptcy lawyer for Kirkland & Ellis. It was, in short, a maze.

The shortcomings became glaringly apparent during two big defaults in the late 1990s, one tied to the Guangdong International Trust & Investment Corporation, and the other Guangdong Enterprises (Holdings) Ltd. The billions of dollars each owed to domestic and foreign creditors could be resolved only with costly state intervention. Writing a new rule, however, was hindered by the possible consequences for workers, who could be left with nothing.

In the future, the claims of workers will take precedence only over unsecured creditors. Whether that creates social upheaval will depend on how many companies go bust (probably many); whether new jobs are available; and whether the government intervenes with emergency subsidies (it has in the past).

Workers will fret; but foreigners should too. The new bankruptcy law will apply to Chinese companies overseas—and to many foreign companies operating in China. Some of these have their actual business assets in China, but have retained their headquarters in Hong Kong or Taiwan, or perhaps used intricate off-shore structures, so as to enjoy a more predictable legal regime. In the past, it was safe to assume that corporate distress could be handled outside China when foreign investors were involved. A company cannot, however, contract itself out of the law, notes Mark Fairbairn, a lawyer at White & Case in Hong Kong. With its new bankruptcy law, China has asserted jurisdiction over who, in the last analysis, controls company assets. This could be a step backwards, increasing state influence. All the more reason for companies to stay on the right side of their creditors.

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China's stockmarket

Sand in the gears

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From The Economist print edition

A new tax hits the euphoric Chinese bourses

Get article background

COULD it really be that easy? This week China abruptly raised the “stamp duty” it levies on share purchases. For a day or so, the increase seemed to accomplish what dire warnings by Chinese officials could not—a fall in China's bubbly stockmarket. On May 30th prices on the Shanghai Composite Index dropped by 6.5%. But they promptly regained 1.4% by the end of the following day.

For months, the authorities have been as eager as any bear for a market decline. In the past jawboning had some effect. But recently a swelling throng of retail buyers, and even many experienced bankers, have felt sure the government would not seriously spoil their party until after the Olympic games to be held in Beijing next summer.

To support this theory they cite the unwillingness of the authorities to do anything with great bite. Interest rates have been raised twice this year, but not by much. The issuance of new mutual-fund shares was capped in December, but the restrictions ended when share prices dropped in February. There have been threats of a capital-gains tax, and brokers must now tell the hordes of new customers packing into their offices that prices can fall as well as rise. But brokers say that as long as prices go up, their customers do not care. The only message they heed is the one on the tape.

The tripling of the stamp tax, to 0.3%, makes the position of regulators abundantly clear. But the duty fails to address why valuations in China have become unhinged. For a market to work effectively it needs information. In China corporate disclosure is weak. There is a desperate need for regulatory pressure to force public companies to say more about what they do and to tell the public, not just a tiny pool of connected investors. Encouraging information, however, is not a Chinese speciality.

Conversely, China needs fewer regulatory restraints on the investment options available to its citizens. It should allow them to invest more freely abroad, or in commercial paper and bonds. Instead it tries to widen opportunities by encouraging public offerings, priced to jump on issuance. This has dangerously stoked demand.

Suppose the authorities were to find a way to bludgeon the stockmarket, knocking, say, a quarter off share prices. That would inflict misery on the new investor class, and valuations would still not be particularly cheap. The best way to curb the excesses of China's sharebuyers is to give them somewhere else to put their money.

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Economics focus

Guests v gatecrashers

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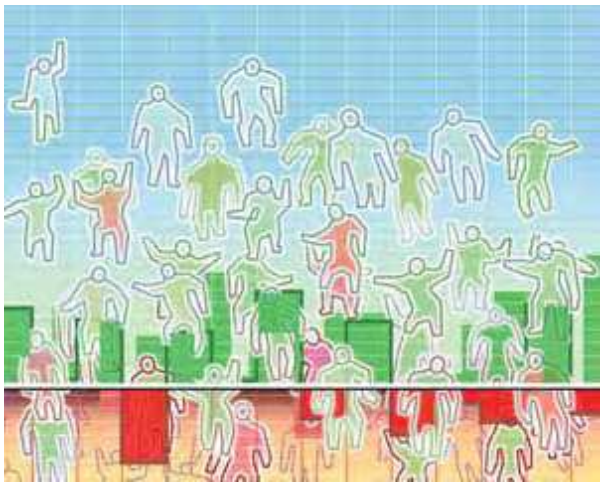
Jac



The uncomfortable economics of immigration reform

Get article background

HOW much of a jerk do you have to be to oppose immigration? That question is mischievously posed, and ingeniously answered, in a recent post on "YouNotSneaky", an economics blog.

The blog's author points out that a low-skilled worker can make $9.34 an hour in America, compared with just $2.56 in Mexico. He also assumes that migrants depress the wages of low-skilled Americans by 5%—a widely cited estimate. Thus Mexican workers gain dramatically by moving north, whereas low-skilled Americans lose out slightly at worst. To justify opposing immigration, the blog concludes, you must attach at least 20 times more weight to the well being of a native-born American than to a Mexican.

Such calculations will not trouble America's politicians, who are busy trying to solve the "problem" of illegal immigration. Congress's fix promises a sorely needed path to citizenship for the 12m or so people already in the country illegally. But it could prove worse than the status quo for future migrants and native-born Americans alike.

The "compromise plan", hashed out by a bipartisan group of senators, offers would-be illegals—the 500,000 or so low-skilled workers who sneak across the border every year—a legitimate route into America, through a temporary guest-worker programme. Guest-worker visas would last for two years and could be renewed up to three times. The idea is that if the front door is ajar, no one will feel the need to break in at the back.

Unfortunately, the senators' plan ignores the economics of illegal immigration. Its laws of motion are set out in a recent paper* by Gordon Hanson of the University of California, San Diego. He points out that unskilled labour is increasingly scarce in America. Since 1960 the share of native-born workers with less than a high-school diploma has fallen from 50% to 12%. In response, illegal immigration has proved to be a fairly efficient system for matching willing workers with eager employers. Some 24% of farm workers, 17% of cleaners and 14% of construction workers are foreigners doing their jobs illicitly.

This workforce is geographically mobile, and sensitive to economic conditions in America or at home. One study in the 1990s showed that a 10% drop in Mexican pay relative to American wages prompted a 6% increase in attempts to steal across the border. More recently, the incentives have shifted the other way. A slowdown in remittances to Mexico and other Central American countries suggests the housing bust, and home-building slump, may have reduced the pace of illegal immigration.

Such efficiency is sadly absent from Congress's guest-worker scheme. The senators' original compromise envisaged some 400,000 visas a year, not far off the estimated figure for illegal entrants. But the number has already been slashed to 200,000 and will not vary with economic conditions. Employers will have to prove that they cannot find a willing American worker before they apply for the visas. And would-be migrants must undergo background checks and a medical exam before they arrive. Changing employers once in America involves more bureaucratic hoops.

In short, neither American employers nor would-be migrants are likely to find the guest-worker channel as appealing as the illegal routes they already ply. Not surprisingly, therefore, the senators want to make illegal immigration less appealing. The compromise bill promises some 6,000 extra border guards, hundreds of miles of new fencing and a huge database for checking workers' legal status.

Is all this policing and picketing worth it? Illegal immigration, after all, is a boon to the economy as a whole, much as freer trade yields a net economic gain. An influx of low-skilled workers may squeeze the wages of their competitors, but it benefits the businesses who hire them, and profits consumers, who get their lawns mown and children minded at lower costs.

Set against this economic gain is a fiscal cost, as immigration's opponents are quick to point out. Illegal migrants, with their low skills and large families, are likely to consume more in government services, such as education and health care, than they pay in taxes. The exact fiscal impact is controversial. The federal government is probably a net winner, whereas states, which pay a bigger share of schooling and emergency health care, lose out. Today's taxpayers may suffer—they must pay for educating the children of illegal immigrants. But tomorrow's may gain—these first-generation Americans will likely earn far more than their parents, adding to the pot of taxes in the future.

YouNotThrifty

In the short term the fiscal burden imposed by illegal immigrants may outweigh the economic gains they bring. In other words, the average native-born American has a higher pre-tax income thanks to the country's “broken” border, but his post-tax income may be slightly lower. All told, Mr Hanson thinks that illegal immigration might cost native-born residents some 0.07% of GDP.

But that net cost, if it exists at all, is clearly less than the price of keeping illegal workers out. Since 2001 Congress has more than doubled the amount of money spent on securing the borders and enforcing immigration laws. Mr Bush's 2008 budget proposes spending $13 billion, or 0.1% of GDP. The senators' plans would be even more expensive. A needlessly cumbersome guest-worker plan and a costly war on gatecrashers are bad ideas—even if you don't give a fig for the welfare of would-be migrants.

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* “The Economic Logic of Illegal Immigration”, Council on Foreign Relations Special Report, April 2007.

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Global warming

A stairway to heaven?

May 31st 2007 | ACAPULCO
From The Economist print edition

Earth has a natural transport system standing ready to get rid of carbon dioxide. Here is how it might be turned on

XGZ

MOST solutions to the problem of global warming are tediously, almost oppressively, quotidian. Switch the lights off. Stop using fossil fuels to make electricity. Run an efficient car. Don't fly. A few grandiose projects have also been suggested, such as giant parasols in space or adding iron to the ocean to encourage planktonic algae to grow and soak up carbon dioxide. On the whole, though, those big ideas are either mad or could have dangerously unpredictable consequences.

That does not mean that lateral thinking about the problem has no place. And the idea proposed by Alfred Wong of the University of California, Los Angeles, at last week's meeting of the American Geophysical Union, in Acapulco, is about as lateral as they come. Dr Wong reckons the problem is not so much that CO_2 is being thrown away, but that it is not being thrown far enough. According to his calculations, a little helping hand would turn the Earth's magnetic field into a conveyor belt that would vent the gas into outer space, whence it would never return.

The site of the conveyor Dr Wong is proposing to build is the Arctic. More specifically, he is suggesting it be over one of his workplaces, the High Power Auroral Stimulation facility near Fairbanks in Alaska that he set up 20 years ago to stimulate and study artificial auroras.

The Arctic sky is special because it is one of the two places (the other being the Antarctic) where the magnetic shield of the Earth opens up to outer space. Auroras, such as the one pictured above, pleasingly testify to a stream of particles from the sun that gets through and hits the atmosphere. These particles bring with them many gigawatts of power that Dr Wong wants to harness to reduce the concentration of greenhouse gases in the atmosphere.

Going up in the world

His idea starts with the fact that CO_2 molecules like to team up with loose electrons, to form CO_2 ions. A few percent of the CO_2 molecules in the air manage to find such electrons. As a result they become negatively charged.

The second piece of luck is that all over the Earth there is a constant vertical electrical field. The surface and the atmosphere form a giant battery, as the lightning discharges of thunderstorms demonstrate. This field tends to make negatively charged ions, such as those of CO_2, drift upward. At first this happens slowly, because collisions with other molecules keep throwing the drifting ions off course. But after a few days they arrive at an altitude, about 125km up, which is so rarefied that an ion can move freely about.

This is when the last stage of their one-way trip into space begins: sailing along the magnetic field of the Earth.

High in the polar regions, the lines of magnetic force point almost straight upwards. When a charged particle is in a magnetic field, it tends to travel along that field's lines of force, spiralling as it goes. In the case of a CO_2 ion at an altitude of 125km, it spirals round 17 times a second.

However, as it travels upwards, it experiences a weakening field. It must then make fewer turns per second, in obedience to a law of physics called the conservation of magnetic moment (this is similar to the law of conservation of angular momentum that slows a spinning ice dancer down as he spreads his arms). And because it cannot just shed its energy of movement, it is forced to travel faster and faster in the direction of the field. The eventual result is that it is ejected into space.

That, at least, is the theory. And although CO_2 is too rare even in today's atmosphere for the phenomenon to be detected by existing satellites, an equivalent ejection of oxygen, a far more abundant gas, can be detected from space. So it seems more than likely that Dr Wong's analysis of what is going on in nature is right. The question is, can CO_2 molecules be given an artificial leg-up into space, so that they leave the atmosphere in sufficient numbers to make a difference to climate change? Dr Wong thinks they can.

The leg-up he proposes comes in two stages. First, he has to ionise more CO_2. There are many ways this might be done, but for a first experiment Dr Wong proposes zapping dust in the atmosphere with powerful lasers, to release electrons that can then combine with CO_2. Having created the ions, he will then nudge those that have drifted upwards to the appropriate height with radio waves of exactly 17 cycles a second, which will give them a nice stock of energy at the beginning of their spiralling phase.

Once they are there, Dr Wong expects the incoming stream of charged particles that cause auroras to deliver the bonus that will make the whole thing work, by dumping some of their energy into the spiralling as well. This should happen through a process called stochastic resonance: the spiralling molecules get preferential treatment, so to speak, because they stand out in what is otherwise an environment of random movements.

So far, Dr Wong has only rough calculations of the energy needs of his scheme, but these suggest that his lasers and radio transmitters, even if powered by fossil-fuel generated electricity, should cause far less CO_2 to be put into the atmosphere than they ship out of it. The key to this efficiency is the free energy arriving by stochastic resonance. If the particles do their bit, he thinks that a few dozen megawatts of additional electrical power is all that will be needed to make a dent in the amount of CO_2. Exactly how big that dent would be, he is not yet sure. But he is pretty sure it would be big enough to help.

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Linguistics

Words in code

May 31st 2007
From The Economist print edition

The speakers of tonal and non-tonal languages have genetic differences

FIVE years ago three well-known academics, including Noam Chomsky, wrote that the half-century old "interdisciplinary marriage" between biology and linguistics "has not yet been fully consummated." That same year other scientists described the molecular evolution of a gene called FOXP2 which, when mutated, seems to cause people severe difficulty with grammar and articulation.

Another genetic condition that could shed light on the biology of linguistics is microcephaly (sometimes rudely called "pin-headedness"). It is linked to six genes, a spanner in the works of any of which leads the human brain to grow to only two-thirds of a pint in adults. That is less than a third of its normal volume. Those genes are alluring objects for studying the evolution of language because brain size has ballooned in people since their line split with that of their closest relatives. Even though birds sing and bees dance, nothing in nature matches a human's richly complicated system of vocal communication. In short, language makes humans unique and genes active in the developing brain make language possible.

Dan Dediu and Robert Ladd, of the University of Edinburgh, are helping biology and linguistics become intimate at the genetic level. In the current issue of the *Proceedings of the National Academy of Sciences* they describe a statistical analysis of two of the genes that cause microcephaly when they go wrong. Like many genes, both exist in different functional versions, called alleles, which are spread unevenly among human populations.

First, Dr Dediu and Dr Ladd checked that their two genes of interest really are unusual. They combined a database of 983 alleles that are known to vary across human groups with another enumerating how 26 discrete linguistic features (such as whether consonants aggregate at the beginnings and ends of words) are either used or not used in conversation by 49 populations. Picking apart a thicket of possible correlations, Dr Dediu and Dr Ladd found no general links between human genetic and linguistic characters.

But one feature—whether a language uses pitch as well as vowels and consonants to convey word meanings—stood apart. Those, such as Chinese, that encipher meaning in pitch are called "tonal languages". Those that do not, like English, are "non-tonal". And it was versions of Dr Dediu's and Dr Ladd's two microcephaly-related genes that matched the 49 populations along tonal and non-tonal lines.

Dr Dediu and Dr Ladd believe the evolution of tonal and non-tonal languages interacted with the evolution of these genes. Certain alleles could have predisposed people to a tonal-language structure. That tonal language, if used by individuals with whom communicating well is particularly helpful, could then reinforce selection for those alleles. Probably not coincidentally, the two alleles that are associated with non-tonal languages evolved recently in human history (some 5,800 and 37,000 years ago) and show signs of being strongly beneficial to their carriers.

Correlations such as these can shift the balance of evidence, but it is demonstrating causation in addition to correlation that forms the glue of the scientific method. Here the marriage between language and genetics hits a problem. No suspicious-looking gene can be added or eliminated in an experimental mouse in order to discover its effects on language, since mice cannot speak. At best, researchers can try to fill in gaps between molecular biology and behaviour.

In March, Narly Golestani and her colleagues at University College, London, showed that people who are fast at learning the sounds of foreign speech have more densely packed white matter in a part of the brain called the left Heschl gyrus. Patrick Wong and his colleagues at the University of Texas, Austin, recently found that adult English speakers fall into two groups, according to their ability to learn tonal distinctions. The more successful also had bigger left Heschl gyruses. The next task is to see if genetic differences can be pinned on the two groups—and, if so, exactly which genes are involved.

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Conservation policy

Trading down

May 31st 2007
From The Economist print edition

Protecting endangered species less could help save them

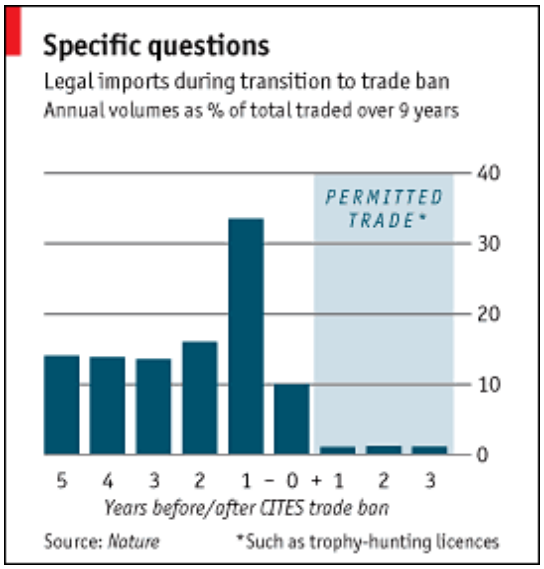
WHEN supply outpaces demand prices go down. That simple premise of economics works for the trade in creatures as well as it does for the oil market. But similarity is lost when these two resources get close to running out. The last dregs of oil will be so difficult and costly to tap into that they will persist in pockets of awkward geology long after humans have given up on the stuff.

Living animals, on the other hand, must meet and mate to maintain their numbers. The final, surviving specimens of a species find meeting one another as difficult as the most ardent trophy hunters do locating them. Thus populations ultimately disappear when their demography crosses an invisible point of no return, descending into what conservationists call an “extinction vortex”. This is why banning the trade in highly endangered creatures seems to make sense. In this week's *Nature*, however, Philippe Rivalan of University Paris-Sud and his colleagues propose the opposite policy.

Banning the buying and selling of a species involves listing it under Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). That treaty has a second tier of control. Organisms in Appendix II can be traded in a regulated manner, with permits and licences. Any member state can propose that a species be moved between appendices (or newly on or off the CITES register). Other countries then vote on that suggestion. Switching takes about a year.

Dr Rivalan and his colleagues have shown that this long-winded process gives the market so much time to respond that bumping animals up from Appendix II to Appendix I can do more harm than good. Merchants anticipate a ban after many months of paper-pushing and stock up with all the goods they can. That drives up demand, price and, consequently, supply. During one such dawdling period of evaluation, some 2,800 Kleinmann's tortoises became the object of legal barter—a number representing half the total estimated population of that species. On average the 46 animal species moved from Appendix II to Appendix I between 1980 and 2003 were traded at 135% above normal volumes in the year before a ban (see chart). And even when a ban is in place, the perception of scarcity it promotes can increase values and illegal poaching.

Infographics



What irks Dr Rivalan is that such sudden jumps in demand threaten the very existence of species that the bans are supposed to protect. Conversely, downgrading species can do their numbers a lot of good. The Nile crocodile was demoted to Appendix II in 1981, a measure that allowed farmed populations to meet the demand for skins. That reduced pressure on wild ones.

The next CITES meeting begins on June 3rd. This time the Brazilian caiman and the Bolivian vicuña are up for tactical relegation to Appendix II. The 200 remaining Guatemalan bearded lizards, however, face the possibility of stronger legal protection. Maybe they can fight it off.

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The Cambrian explosion

Crystal clear

May 31st 2007
From The Economist print edition

An old theory of the diversity of life re-emerges invigorated

FIRST it was the arrival of shells, then it was a quickening of the climate at the end of a planet-wide ice age, then it was the appearance of the eye. Now it is back to shells again. The latest explanation of the Cambrian explosion, the moment 540m years ago when animal life suddenly got much bigger, more abundant and more diverse, has returned to the idea that the crucial change was the evolution of hard bits. As they report in *Science*, Gert Wörheide of the University of Göttingen, in Germany, and his colleagues, think they have shown that this innovation happened only once—and thus led to what evolutionary biologists call an adaptive radiation.

One of the enzymes involved in shell formation is called carbonic anhydrase. It converts carbon dioxide and water into bicarbonate ions. These are precursors of the carbonate part of calcium carbonate, crystals of which are the main ingredient of the shells and exoskeletons of marine invertebrates. There are many versions of carbonic anhydrase, however, and only some are involved in making shells.

What Dr Wörheide has done is to add a branch to the evolutionary tree of carbonic anhydrase and show that the shell-making version was probably present in the ancestor of all multicellular animals now alive—shell-less humans included. That helps answer the question of whether the chemistry needed to make shells evolved independently in lots of different animals, perhaps in response to an environmental shift, or whether it evolved only once.

Dr Wörheide and his team were able to draw their conclusion by studying a sponge called *Astrosclera*. Sponges are the oldest living group of multicellular animals, and although most have skeletons made of silica some, like *Astrosclera*, have a secondary calcium-carbonate skeleton. The researchers wanted to see if this skeleton, too, relied on carbonic anhydrase.

To do so, they chopped up some sponges and analysed the skeletal elements. They were looking for enzymes resembling carbonic anhydrase and also for messenger molecules from the nucleus that carried the instructions for making such enzymes. They found both. Indeed, they found not one but three enzymes related to carbonic anhydrase in the sponge, together with evidence that all three were active in skeleton formation.

If sponges, a separate branch of multicellular life from the more familiar sorts of animal, also have skeleton-forming carbonic anhydrase, that adds a lot of weight to the idea that the common ancestor of all multicellular animals possessed it and that it, therefore, was the “killer application” that allowed the animal kingdom to radiate and conquer the depths of the Cambrian ocean. At least, it does until the next explanation for this strange evolutionary event is put forward.

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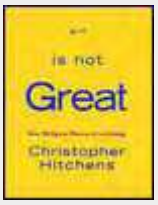
Is there a God?

To believe or not to believe

May 31st 2007
From The Economist print edition

A writer who believes in science not God; a scientist who believes in both. But why are they that way? Nobody knows

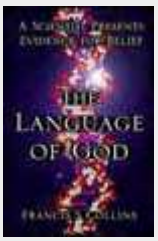
God is Not Great: How Religion Poisons Everything
By Christopher Hitchens



Twelve Books; 288 pages; $24.99.
Atlantic Books; £17.99

Buy it at
Amazon.com
Amazon.co.uk

The Language of God: A Scientist Presents Evidence for Belief
By Francis Collins



Free Press; 304 pages; $26.
Simon & Schuster; £17.99

Buy it at
Amazon.com
Amazon.co.uk

Stock Illustration

SINCE arguments about God have run for thousands of years, it is a little peculiar to ascribe overwhelming importance to the publication of Darwin's “On the Origin of Species” in 1859. Yet the book did have a soul-sapping effect on unsuspecting Christians. In “Father and Son”, a memoir about loss of faith published anonymously in 1907, Edmund Gosse describes how it drove his father, himself an eminent zoologist, to take him to live on top of a cliff, cutting him off from the world in an attempt to protect him from this heretical notion. The plan didn't work. Some spirit of rebellion stirred in the son, sending his mind wandering during marathon prayer sessions, and he broke free in his teenage years. His father, disappointed, stuck with the God of Abraham.

Looking at the recent crop of books on God and religion, it is hard to avoid the conclusion that whether people end up like Mr Gosse or like his father depends on whether they have an intrinsic feeling for religion or not. Christopher Hitchens, a polemicist whose tone is that of an erudite straight-talker, does not. Like Mr Gosse, he started non-belief young. Near the beginning of “God is Not Great” he describes his rebellion when confronted with an effusive divinity teacher at school who pointed to the beauty of hedgerows in the English countryside as evidence of His creation. Mr Hitchens has been skewering the syllogistic arguments of the religious in the name of science ever since.

Francis Collins, on the other hand, has it. Like Mr Gosse senior, Mr Collins is a scientist and a Christian. He confronts Darwin daily in his work as head of the human genome project. He writes well about how, as the code on which DNA is written began to reveal itself, his faith and sense of wonder increased. He stood by Bill Clinton (and worked with his speechwriters) when the then American president talked about DNA as “the language in which God wrote creation”. Mr Collins has no time for intelligent design but conceives God to be of the non-interfering sort, a kind of divine CCTV camera. Yet he believes that Jesus was His son and he prays regularly.

Belief in God and subscription to a religion are not quite the same thing, although both books treat them as if they were. Mr Hitchens makes the untestable case that the world would be better off without religion altogether. Stupid religious people would stop fighting stupid religious wars and a new enlightenment would ensue. The book is entertaining, meandering and at times disingenuous. Nobody ever went to war for atheism, says Mr Hitchens. But atheists tend to find other reasons to kill each other. To the objection that irreligious fascists and communists found plenty of non-religious reasons for murder in the 20th century, Mr Hitchens retorts that these beliefs were types of secularised religion, and as such do not count.

What is missing from the book is much sense of what a world without religion, or one that had not had religion in it, might look like. Lots of the principles that Mr Hitchens holds dear, like tolerance and justice, are secularised versions of religious ideas. Religious folk often do the right thing for what Mr Hitchens would call the wrong reasons. Taking faith away would in many cases take away the will to do them. That cost is worth considering.

Mr Collins argues for what he calls “theistic evolution”, which he reckons is yet to catch on because it has such a terrible name. Though the mechanism of the origin of life is unknown, he says, once evolution was under way no special supernatural intervention was required. As for those parts of the Old Testament that bend the laws of physics, they are symbolic and should be read as such.

This is a God that would be almost as unfamiliar to Edmund Gosse's father, to John Calvin or the pope as it would to a Roman sacrificing a bull to Mithras. And for all their clarity, Mr Collins's arguments about why he believes in God do little to explain why he is a Christian. To understand that, it is probably enough to look at the Gosse family and conclude that either you get it or you don't.

God is Not Great: How Religion Poisons Everything.
By Christopher Hitchens.
Twelve Books; 288 pages; $24.99.
Atlantic Books; £17.99

The Language of God: A Scientist Presents Evidence for Belief.
By Francis Collins.
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Uncertainty

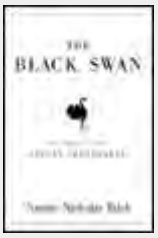
The perils of prediction

May 31st 2007
From The Economist print edition

“IT'S tough to make predictions, especially about the future,” said that great baseball-playing philosopher, Yogi Berra. And yet we continue to try, churning out forecasts on everything from the price of oil to the next civil war. Nassim Nicholas Taleb, a professor of the sciences of uncertainty (who gave us “known unknowns”), has no time for the “charlatans” who think they can map the future. Forget the important things: we can't even get it right when estimating the cost of a building—witness the massively over-budget Sydney Opera House or the new Wembley Stadium.

The problem is that almost all forecasters work within the parameters of the Gaussian bell curve, which ignores large deviations and thus fails to take account of “Black Swans”. Mr Taleb defines a Black Swan as an event that is unexpected, has an extreme impact and is made to seem predictable by explanations concocted afterwards. It can be both positive and negative. Examples include the September 11th 2001 attacks and the rise of the internet. Smaller shocks, such as novels and pop acts whose popularity explodes thanks to word of mouth, can also be Black Swans.

The Black Swan: The Impact of the Highly Improbable
By Nassim Nicholas Taleb



Random House; 400 pages; $26.95.
Allen Lane; £20

Buy it at
Amazon.com
Amazon.co.uk

Humans are bad at factoring in the possibility of randomness and uncertainty. We forget about unpredictability when it is our turn to predict, and overestimate our own knowledge. When researchers asked a group of students to choose a range for the number of lovers Catherine the Great had had, wide enough to ensure that they had a 98% chance of being right, a staggering 45% of them got it wrong.

Why didn't they guarantee being correct by picking a range of none to ten thousand? After all, there were no prizes for keeping the range tight. The answer is that humans have an uncontrollable urge to be precise, for better or (all too often) worse. That is a fine quality in a watch-repair man or a brain surgeon, but counter-productive when dealing with uncertainty.

Mr Taleb cut his philosophical teeth in the basement of his family home in Lebanon during the long civil war there (another Black Swan), devouring books as mortars flew overhead. By the time he began work as a financial-market “quant” in the 1980s, he had already become convinced that the academic mainstream was looking at probability the wrong way. He remains a maverick, promoting the work of obscure thinkers and attacking Nobel laureates. All he is trying to do, he says, is make the world see how much there is that can't be seen.

Why, he asks, do we take absence of proof to be proof of absence? Why do we base the study of chance on the world of games? Casinos, after all, have rules that preclude the truly shocking. And why do we attach such importance to statistics when they tell us so little about what is to come? A single set of data can lead you down two very different paths. More maddeningly still, when faced with a Black Swan we often grossly underestimate or overestimate its significance. Take technology. The founder of IBM predicted that the world would need no more than a handful of computers, and nobody saw that the laser would be used to mend retinas.

Nor do we learn the right lessons from such eruptions. Mr Taleb argues convincingly that the spectacular collapse in 1998 of Long-Term Capital Management was caused by the inability of the hedge fund's managers to see a world that lay outside their flawed models. And yet those models are still widely used today. This is ridiculous but not surprising. Business is stuffed full of bluffers, he argues, and successful companies and financial institutions owe as much to chance as to skill.

That is a little unfair. Many blockbuster products have their roots in bright ideas, rigorous research and

canny marketing, rather than luck. And corporate “scenario planners” are better than they used to be at thinking about Black Swan-type events. Still, this is a small quibble about a deeply intelligent, provocative book. Deftly weaving meditation with hard-edged analysis, Mr Taleb succeeds in bringing sceptical empiricism to the masses.

Do not expect clear answers. He suspects that crises will be fewer in number but more severe in future. And he suggests concentrating on the consequences of Black Swans, which can be known, rather than on the probability that they will occur, which can't (think of earthquakes). But he never makes professional predictions because it is better to be “broadly right rather than precisely wrong”.

The Black Swan: The Impact of the Highly Improbable.
By Nassim Nicholas Taleb.
Random House; 400 pages; $26.95.
Allen Lane; £20

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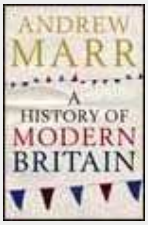
Britain since the war

Shopping v politics

May 31st 2007
From The Economist print edition

IF THERE is one thing the study of history teaches it is that there is precious little truly new under the sun. Look at modern Britain, the subject of a sweeping survey by Andrew Marr, once a writer for this paper and now the thinking woman's television crumpet at the BBC. Winston Churchill clung no less tenaciously than Tony Blair to the Anglo-American relationship, even as quids seemed to fall short of quos. And when the Tories lost the first post-war election to Labour, they stepped smartly towards the centre ground to regain power. David Cameron, who leads the party now, might have studied the road map.

A History of Modern Britain
By Andrew Marr



Macmillan; 629 pages; £25

Buy it at
Amazon.co.uk

Yet so much has changed since the second world war, where Mr Marr takes up his tale. The struggle that defeated Hitler exhausted Britain too, exposing cracks in its fabric. Since then national myths have been jettisoned by the score—myths built around empire, naval power, industrial pre-eminence and a largely white, broadly Christian people. For much of the time Britain seemed doomed, if not to spectacular melt-down, at least to genteel decline as others overtook a once-great power.

Historians still tussle over how to interpret the period, especially the three decades before 1980. Were Britain's leaders misguided, blinded by the desire to preserve its great-power status and to create a welfare state when they should have been rebuilding industry and improving infrastructure, as others in Europe were doing? Historians such as Correlli Barnett believe they were, and that their failure condemned Britain to a near-death experience until Margaret Thatcher came along in 1979. Or, faced with tough economic challenges and pent-up popular expectations, were they in fact surprisingly effective, as the likes of Peter Hennessy and George Bernstein believe?

Mr Marr, no historian but a prolific journalist with a widely enquiring mind, plumps mainly for the optimists. Britain has had “rather a good 60 years”, transforming itself from an inefficient imperialist manufacturer into a wealthier social democracy selling mainly services. Though no prime minister achieved precisely what he set out to do, two delivered in spades. Clement Attlee created the National Health Service that exists today. Lady Thatcher broke the mould of crisis-ridden Britain, reducing the economic role of the state and fostering competition. As a result, Britain has come through to find itself “on the cutting edge of the modern condition, a post-industrial and multi-ethnic island, crowded, inventive and rich”. Mr Marr is right to make that important call.

It is not easy to be stunningly original about a subject as big and tramped over as this one, especially when excellent recent works such as Simon Jenkins's “Thatcher and Sons”, Mr Hennessy's “Having It So Good” and David Kynaston's “Austerity Britain, 1945-51” crowd the shelves. Yet Mr Marr's book, which accompanies a BBC television series launched on May 22nd, is wide-ranging and engaging. He is eloquent on subjects from the gallantry of the “Glorious Glosters” staving off the Chinese hordes at Imjin in Korea to the undersung heroism of North Sea oilmen. His vivid accounts of cabinet machinations from Harold Wilson through to Mr Blair's last days are especially absorbing.

And he has a thesis, though one at which, sadly, he only hints: politics was hijacked in the swinging sixties by shopping and the search for personal fulfilment, and never quite made it back. Mr Marr may be a tad too Scottish to do conspicuous consumption convincingly. But the book is a good gallop from Churchill to the prime-minister-to-be, Gordon Brown—surely, no conspicuous consumer he?

A History of Modern Britain.
By Andrew Marr.
Macmillan; 629 pages; £25

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Courage

Brown's heroes

May 31st 2007
From The Economist print edition

Gordon Brown

HARD not to be cynical when picking up a book on courage by a politician which just happens to be published in the very month in which he becomes Britain's prime minister. After all, politicians have written such books before. Jack Kennedy's "Profiles in Courage", a study of eight American patriots, was published in 1956 with the clear aim of lending intellectual weight to his claim on the presidency. And in this it succeeded, gaining him a Pulitzer prize, even though the charge that it was mostly written by his "research associate", Ted Sorensen, has never gone away.

Courage: Eight Portraits
By Gordon Brown

Bloomsbury; 274 pages; £16.99

Buy it at
Amazon.com
Amazon.co.uk

Gordon Brown has also had the help of a researcher, Cathy Koester, and the British taxpayers who have been paying him to run their economy for the past ten years must surely hope that she has done most of the work. She may not have done. At the very end of the book the author reveals his reason for this undertaking, and you would have to be very cynical indeed not to believe it: these biographical essays were inspired by the "aching sorrow" in which Mr Brown found himself after the death of his newborn daughter, Jennifer, in 2002. The profits will go to a charity set up by his wife, Sarah, to study the causes and consequences of premature birth.

Mr Brown, however, has been interested in courage since his childhood. Indeed, on at least ten occasions he says he is "fascinated" by it. Strangely, though, he has little new to say about it. Seven of his subjects were, or are (two are alive), people of remarkable bravery and strength of character: Edith Cavell (an English nurse executed by the Germans in the first world war), Dietrich Bonhoeffer (a German priest executed by the Nazis), Raoul Wallenberg (the Swedish saviour of countless Jews in 1944-45), Martin Luther King, Nelson Mandela, Cicely Saunders (who helped to found the hospice movement and to transform the treatment of the dying in Britain) and Aung San Suu Kyi (the leader of the resistance to military rule in Myanmar). Mr Brown tells their stories well, for the most part, but he elicits nothing from them that is not familiar.

The eighth choice, Robert Kennedy, is more puzzling. Kennedy was an ambitious and charismatic man who chose to run for the American presidency knowing full well that an attempt on his life was inevitable. That certainly took courage, albeit courage of the "battlefield" variety that Mr Brown recognises as admirable but finds less interesting than moral bravery.

But Kennedy's decision to go for the presidency still looks now, as it did in 1968, much more opportunistic than courageous. Kennedy was willing to challenge the incumbent Lyndon Johnson only after Senator Eugene McCarthy had shown the vulnerability of the president by running him a close second in the New Hampshire primary. Four days after that primary, Kennedy joined the race, thus splitting the anti-war wing of the Democratic Party.

Mr Brown's idealised account of Kennedy's career leads him to the unconvincing claim that Bobby was "the first modern political leader". Another claim, that he was, in 1968, one of the first Western politicians to call for an end to apartheid, is simply bunk.

All in all, this book says nothing new about courage. It might have done, had it tackled some difficult issues, such as whether courage is admirable in those who fight for causes that are less uncontroversially noble than opposing Nazism or apartheid. At the end Mr Brown touches on the topic of ignoble valour but he makes no judgment on it beyond saying, "In our discourse on courage, we continually seek to draw distinction between acts of courage and acts of fanaticism, mindless recklessness, fury-driven malevolence and other extreme behaviour that may masquerade as courage."

The wilder shores of courage

He does not condemn the violence advocated by Bonhoeffer or Mr Mandela, and he writes approvingly of Martin Luther King's discovery that “personal growth comes through struggle, progress through sacrifice, and change through pressure from below”, words that could well have been uttered by a *jihadi*. But Mr Brown does not discuss whether Osama bin Laden, for example, is courageous, and if not why not.

In truth, this is a book about Mr Brown's heroes, and perhaps it tells us as much about him as about them. All eight are remarkable people, and all eight come from a relatively privileged background; no working-class tribunes here. Four had no children to complicate their moral dilemmas. Five were devout Christians. Cavell was a daughter of the rectory, just as Mr Brown is a son of the manse. Kennedy is admired for his moralism, toughness and desire to empower the poor; his story shows “the driving power of social conscience”. Most revealing of all, though, is who is excluded. Mr Brown says his eight “have done almost more than any other men or women I can think of to advance the great causes of our times.” Yet not one is an anti-communist. Is anti-communism a cause without heroes, despite Solzhenitsyn, Sakharov and the rest? Or, for Mr Brown, simply not “great”?

Courage: Eight Portraits.
By Gordon Brown.
Bloomsbury; 274 pages; £16.99

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The Supreme Court

Their majesties

May 31st 2007
From The Economist print edition

THE Supreme Court is the last American institution that has any claim to the word “exalted”. Everything about it—from the marble walls to the black judicial robes—is designed to proclaim the majesty of the law. The bronze doors each weigh six-and-a-half tons. Television cameras are banned. The message is clear. These are not ordinary men (and a woman). They are philosopher kings bent on divining the meaning of the law.

It is easy to poke holes in this mythology. The court moves with the spirit of the times—first endorsing slavery and then embracing civil rights. The justices are all too human with strong prejudices.

Yet hesitate on that poking. The court has often shaped rather than merely reflected public opinion—most famously on civil rights. And justices are quite capable of reaching decisions that conflict with their political prejudices. Antonin Scalia upheld the right of protesters to burn the American flag despite his distaste for bearded weirdos. John Marshall Harlan did more than any other 19th-century justice to advance the interests of black Americans despite coming from a family of slave-owners.

Jeffrey Rosen's book on the justices differs from other Supreme Court exposés in two striking ways. First, it concentrates on temperament rather than ideology. Mr Rosen studies a succession of contrasted individuals to demonstrate that “a pragmatic disposition, a degree of humility and common sense, and the ability to interact well in groups” have proved more important in determining a justice's long-term influence than academic brilliance or rigid consistency. Second, it ends up reinforcing the idea of the court's majesty. Mr Rosen shows that the most influential justices are the ones who can put aside their personal agendas for the good of the institution.

The most influential justices—from John Marshall to Hugo Black to William Rehnquist—were all willing to put the interest of the institution above their personal peccadillos. Others have been less influential because they have been too uncompromising. Oliver Wendell Holmes was obsessed with his own brilliance; William Douglas was addicted to drink and women (being a Supreme Court justice was apparently a great pulling point with air hostesses); Mr Scalia is the slave of a philosophical creed.

“The Supreme Court” is in many ways a hymn of praise to John Roberts, the current chief justice. Mr Roberts is a philosophical conservative who dislikes the overreach of Earl Warren's much celebrated court in the 1950s and 1960s with its cloudy reasoning—penumbras and emanations indeed!—and its addiction to legislating from the bench. But he is also an institutionalist who respects legal precedent and who works hard to produce the biggest possible majorities.

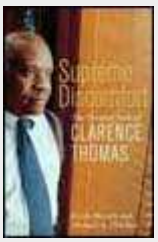
“Supreme Discomfort” is nowhere near as good a book. It vacillates between trying to be fair to Clarence Thomas and giving him a good dunking (it quotes him declaring: “My favourite movie of all time is ‘Deep Throat’...I've seen that mother-fucker six times”). The bruising Mr Thomas endured at his confirmation proceeding seems to have cured him of what little instinct he might once have had for compromise. It also dispelled any notion that he might have harboured that justices should keep their personal political links under wraps. A few years after he joined the bench, he happily presided at the third marriage of Rush Limbaugh, a far-right radio show host—which perhaps let too much light on the majesty of one justice.

The Supreme Court: The Personalities and Rivalries that Defined America
By Jeffrey Rosen

Times Books; 274 pages; $25

Buy it at
Amazon.com
Amazon.co.uk

Supreme Discomfort: The Divided Soul of Clarence Thomas
By Kevin Merida and Michael Fletcher



Doubleday; 320 pages; $26.95

Buy it at
Amazon.com
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Max Beckmann

Dutch treat

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From The Economist print edition

An exhibition in Amsterdam of a modern German master

CAST by the Nazis as a “cultural Bolshevik”, Max Beckmann left Germany for America in 1937, but could not get a visa, so spent the war in Amsterdam. There Germany's great modernist produced about 300 works, a third of his entire output. Almost none of them, however, remain in the Netherlands.

An exhibition at the Van Gogh Museum in Amsterdam makes up for this lack. On display are some of Beckmann's strongest works. The exhibition's curator, Beatrice von Bormann, has tracked down the Amsterdam art in Germany and America, which Beckmann did eventually reach in 1947 and where he died three years later. Ms von Bormann also contributes to a substantial book on the painter to be published by Hatje Cantz on July 1st.

Beckmann, born in 1884, came to maturity during the period of German Expressionism, which flourished from the turn of the century until the first world war, but he was a loner, never belonging to a school or movement. His fame was prodigious, though. In Germany prizes and one-man shows abounded.

The Nazis changed everything. In 1933 he lost his teaching job in Frankfurt and was forbidden to exhibit; 22 of his paintings were put into the infamous “Degenerate Art” exhibition mounted in Munich in 1937. He read the runes and, with his wife Quappi, fled the Nazi state.

In Amsterdam Beckmann had a couple of rooms and a spacious studio. Paintings and drawings poured out. For the most part, the Germans left him alone. Friends bought his work, and he lived well, spending nights in cafés, cinemas and brothels, drinking heavily, always observing. But by 1943 he was addicted to a sleeping drug, Adalin. Depression permeates many paintings of this period, notably the 1944 “Self-Portrait in Black”, from which a grim Beckmann stares out like a haunted sentinel.

The Amsterdam works are superb. The triptychs, four out of the nine for which he is famous, are a particular wonder: vibrant explorations of his obsession with myth, theatre and mortal life, all depicting, with his familiar iconography—swords, musical instruments, clowns—the effects of war and exile. For Beckmann, the ten years were frustrating. For posterity, they are wonderful.

“Max Beckmann in Amsterdam, 1937-1947” is at the Van Gogh Museum, Amsterdam, until August 19th. It is then at the Pinakothek der Moderne, Munich, from September 14th to January 16th 2008.

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Stanley Miller

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From The Economist print edition

Reuters

Stanley Miller, seeker after the origin of life, died on May 20th, aged 77

BIOLOGISTS often talk of evolutionary theory as though it had solved the mystery of life. It has undoubtedly solved the mystery of how life changes and develops, but it has not solved the deeper question of where life came from in the first place. Still, every flash in the pan in the search for the elusive elixir is an excitement, and the experiment carried out 55 years ago by Stanley Miller both dazzled the world and defined the career of this keen, young researcher at the University of Chicago.

Mr Miller's experiment was almost alchemical in its approach—appropriately, since what the alchemists sought was, in essence, the vital spirit. In the early 1950s biochemists had established to their own satisfaction that the most important biological molecules were proteins. Since these were the key to life, they, or at least their component units, the amino acids, must have been present on Earth before life got going, otherwise nothing would have been around from which the first living organism could have been assembled. The question was how those amino acids came into being.

That Mr Miller was the person to provide a possible answer was almost a fluke. Originally, he had intended to work under Edward Teller, the inventor of the hydrogen bomb. But soon after he arrived at Chicago, Teller left for California, leaving the graduate student tutorless. Eventually, Mr Miller persuaded a chemist called Harold Urey to take him under his wing.

Urey, too, had been involved in atomic-bomb work. He had won a Nobel prize for discovering deuterium, the heavy form of hydrogen found in “heavy water”, which can be used to control, and thus harness, nuclear fission. But Urey had originally been a zoologist, and he was keenly interested in the origin of life, in particular, Charles Darwin's musings about life starting in a “warm little pond, with all sorts of ammonia and phosphoric salts, light, heat, electricity, etc, present [and thus] a protein compound was chemically formed ready to undergo still more complex changes”. These thoughts he had gone so far as to elaborate into a research proposal.

After some negotiation, however, Mr Miller persuaded Urey that he was the one to turn this proposal into glassware and make it work. He thus put together a collection of apparatus that would not have disgraced the set of a mad-scientist horror film, and filled it with a mixture of methane, ammonia, hydrogen and water vapour that matched contemporary ideas of what the primitive terrestrial atmosphere had been composed of.

As Darwin had suggested, heat and electricity were added to the mix to mimic the effects of vulcanism and lightning (later experiments also included light of the ultraviolet variety, to represent the powerful rays of the young sun). The gases were then circulated round and round the flasks and tubes. The result, after several days, was a sludgy brown stain at the bottom of the reaction vessel—a stain that proved to

contain amino acids.

When “A Production of Amino Acids under Possible Primitive Earth Conditions” was published in May 1953, the press went wild. To Urey's credit, the young Mr Miller did not suffer the common fate of graduate students—relegation to the sidelines when the master's hypothesis is proved right. As Urey generously observed, “I've already got my Nobel prize.” It was Mr Miller who received both the scientific kudos and the public fame.

At the time, the experiment looked like the start of something big, and speculation about a Nobel prize was by no means fanciful. Spectroscopic analysis of the atmospheres of gaseous planets such as Jupiter suggested the ingredients used were abundant. The new science of radio astronomy indicated that elements of the recipe were also floating around in space. A meteorite packed with amino acids made a timely landing in Australia. Yet the whole thing never came together. It is one thing to assemble the ingredients. It is quite another to bake a cake from them.

Part of the problem, although it was not obvious at the time, was outlined in a paper published mere weeks before Mr Miller's. Compared with the newspaper coverage of the Miller-Urey experiment, “A Structure for Deoxyribose Nucleic Acid” did not attract much popular attention. Although its authors have now far eclipsed Mr Miller in fame, few then would have noticed the names James Watson and Francis Crick.

No protean proteins

This paper confirmed that, important as proteins were, they were not the essence of life. It is how DNA—the stuff of genes—came about that is the real mystery. It helps to know that amino acids are easy to make. But no primitive life form was ever going to crawl out of one of Mr Miller's flasks, as some of the less cautious headlines at the time suggested.

Mr Miller went on to perform a zillion variants of the original experiment, of course, and eventually got it to produce the building blocks of DNA as well as proteins. But there was no great leap forward of the sort that followed the Watson-Crick paper. As a result of that article, scientific understanding of how life works has advanced by leaps and bounds. How it all started, though, is little clearer than the day Mr Miller first switched on his apparatus.

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Overview

May 31st 2007
From The Economist print edition

China's main stockmarket index fell by 6.5% on May 30th, after the government raised the tax on trading shares. The decline was the biggest since February 27th, but unlike then it had little impact on other stockmarkets. Indeed, the **S&P 500** climbed to 1530.23, a record close that surpassed the high set in March 2000.

The ratesetters at **America's** central bank thought that core inflation was “uncomfortably high” when they met on May 9th. The risk that inflation would fail to moderate as desired remained their main concern, according to minutes of the meeting.

In **Japan** the jobless rate fell to a nine-year low of 3.8% in April. Consumer prices rose by 0.3% in April, leaving them where they had been a year earlier. Industrial production was weak, falling by 0.1% in April, which left output 2.3% higher than a year before.

Industrial production grew strongly in several Asian countries. In Indonesia it rose by 11.9% in the year to March. In Singapore it grew by 18.8% in the 12 months to April.

In the **euro area** the M3 measure of money grew by 10.4% in the 12 months to April. The rapid expansion reinforced expectations that the European Central Bank will raise the base rate to 4.0% when it meets on June 6th.

In **South Africa** higher interest rates loomed after inflation rose to 7.0% in the 12 months to April and targeted inflation (excluding mortgage costs) reached 6.3%, above the central bank's upper limit.

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Output, prices and jobs

May 31st 2007
From The Economist print edition

Output, prices and jobs

% change on year ago

	Gross domestic product				Industrial production	Consumer prices			Unemployment
	latest	qtr*	2007†	2008†	latest	latest	year ago	2007†	rate‡, %
United States	+2.1 Q1	+1.3	+2.1	+2.7	+1.9 Apr	+2.6 Apr	+3.5	+2.4	4.5 Apr
Japan	+2.0 Q1	+2.4	+2.4	+2.2	+2.3 Apr	nil Apr	–0.1	nil	3.8 Apr
China	+11.1 Q1	na	+10.3	+9.7	+17.4 Apr	+3.0 Apr	+1.2	+2.8	9.8 2006
Britain	+2.9 Q1	+2.9	+2.7	+2.5	–0.2 Mar	+2.8 Apr**	+2.0	+2.3	5.5 Mar††
Canada	+2.3 Q4	+1.4	+2.3	+2.7	–1.2 Feb	+2.2 Apr	+2.4	+1.9	6.1 Apr
Euro area	+3.1 Q1	+2.4	+2.4	+2.1	+3.7 Mar	+1.9 Apr	+2.4	+1.9	7.2 Mar
Austria	+3.2 Q1	+3.3	+2.8	+2.6	+6.8 Mar	+1.8 Apr	+1.9	+1.6	4.4 Apr
Belgium	+2.8 Q1	+2.4	+2.4	+2.2	+2.0 Mar	+1.3 May	+2.2	+1.8	11.0 Apr‡‡
France	+2.1 Q1	+2.4	+2.1	+2.1	+1.1 Mar	+1.3 Apr	+1.7	+1.4	8.2 Apr
Germany	+3.6 Q1	+2.1	+2.3	+2.1	+7.7 Mar	+1.9 May	+1.9	+1.8	9.2 May
Greece	+4.6 Q1	na	+3.3§	+3.2§	+0.1 Mar	+2.5 Apr	+3.3	+2.6§	9.0 Feb
Italy	+2.3 Q1	+0.8	+1.9	+1.6	+1.6 Mar	+1.5 Apr	+2.2	+1.9	6.5 Q4
Netherlands	+2.5 Q1	+2.3	+2.6	+2.5	+5.8 Mar	+1.8 Apr	+1.6	+1.6	4.7 Apr††
Spain	+4.1 Q1	+4.6	+3.5	+2.8	+2.3 Mar	+2.4 Apr	+3.9	+2.6	8.2 Apr
Czech Republic	+5.8 Q4	+5.8	+5.3	+4.9	+12.7 Mar	+2.5 Apr	+2.8	+2.6	6.8 Apr
Denmark	+2.9 Q4	+1.5	+2.3	+2.3	+6.1 Mar	+1.7 Apr	+1.8	+1.9	3.9 Mar
Hungary	+2.9 Q1	+2.8	+2.6	+3.1	+6.8 Mar	+8.8 Apr	+2.3	+6.8	7.5 Apr††
Norway	+2.8 Q1	+2.9	+2.7§	+2.4§	–4.0 Mar	+0.3 Apr	+2.7	+1.6§	2.7 Mar††
Poland	+7.4 Q1	na	+6.0	+5.3	+12.4 Apr	+2.3 Apr	+0.7	+2.2	13.7 Apr‡‡
Russia	+7.9 Q1	na	+6.7	+6.4	+4.6 Apr	+7.8 Apr	+10.0	+8.2	7.0 Apr‡‡
Sweden	+3.0 Q1	+2.6	+3.8	+3.1	+9.0 Mar	+1.9 Apr	+1.5	+1.6	4.6 Apr‡‡
Switzerland	+2.4 Q1	+3.2	+2.1	+2.0	+8.9 Q4	+0.5 Apr	+1.1	+0.6	2.9 Apr‡‡
Turkey	+5.2 Q4	na	+4.6	+5.7	+2.6 Mar	+10.7 Apr	+8.8	+8.3	11.4 Q1‡‡
Australia	+2.8 Q4	+4.2	+3.0	+3.2	+3.7 Q4	+2.4 Q1	+3.0	+2.6	4.4 Apr
Hong Kong	+5.6 Q1	+2.0	+5.3	+4.9	–1.4 Q4	+1.3 Apr	+1.9	+2.4	4.3 Apr††
India	+9.1 Q1	na	+8.1	+7.6	+12.9 Mar	+6.7 Mar	+4.9	+5.7	7.6 2006
Indonesia	+6.0 Q1	na	+6.0	+5.8	+11.9 Mar	+6.3 Apr	+15.4	+6.5	10.3 2005
Malaysia	+5.3 Q1	na	+5.4	+5.6	–2.7 Mar	+1.5 Apr	+4.6	+2.3	3.0 Q4
Pakistan	+6.6 2006§§	na	+6.6§	+6.0§	+6.8 Sep	+6.9 Apr	+6.2	+6.8§	na
Singapore	+6.1 Q1	+7.6	+5.5	+5.7	+18.8 Apr	+0.6 Apr	+1.1	+1.6	2.9 Q1
South Korea	+4.0 Q1	+3.6	+4.3	+4.6	+6.7 Apr	+2.5 Apr	+2.0	+2.2	3.3 Apr
Taiwan	+4.2 Q1	na	+4.2	+4.6	+2.6 Apr	+0.7 Apr	+1.2	+1.3	4.0 Apr
Thailand	+4.2 Q4	+2.7	+4.0	+4.7	+6.7 Apr	+1.8 Apr	+6.0	+2.5	1.5 Feb
Argentina	+8.6 Q4	+7.4	+7.5	+5.7	+6.8 Apr	+8.9 Apr	+11.6	+9.8	9.7 Q1‡‡
Brazil	+4.8 Q4	+3.6	+3.9	+3.7	+3.9 Mar	+3.0 Apr	+4.6	+3.6	10.1 Apr‡‡
Chile	+5.8 Q1	na	+5.2	+5.1	+5.2 Apr	+2.5 Apr	+3.8	+2.6	6.8 Apr†††‡
Colombia	+8.0 Q4	nil	+5.4	+4.6	+15.1 Mar	+6.3 Apr	+4.1	+5.1	12.0 Mar‡‡
Mexico	+2.6 Q1	+0.6	+3.2	+3.8	+0.2 Mar	+4.0 Apr	+3.2	+3.8	3.6 Apr‡‡
Venezuela	+11.8 Q4	na	+6.6	+3.9	+6.7 Jan	+19.4 Apr	+11.4	+17.6	10.3 Q1‡‡
Egypt	+7.4 Q1	na	+6.3	+5.6	+10.5 2006	+11.7 Apr	+4.4	+9.9	9.0 Q4‡‡
Israel	+5.4 Q1	+6.3	+4.7	+4.3	+5.2 Mar	–1.3 Apr	+3.8	+0.9	7.7 Q1
Saudi Arabia	+3.4 2006	na	+3.9§	+5.0§	na	+2.9 Mar	+2.5	+2.5§	na
South Africa	+5.4 Q1	+4.7	+4.8	+4.9	+5.2 Mar	+7.0 Apr	+3.3	+5.4	25.5 Sep‡‡
MORE COUNTRIES Data for the countries below are not provided in printed editions of *The Economist*									
Estonia	+9.9 Q1	+9.5	+9.2§	+7.6§	+7.4 Mar	+5.5 Apr	+4.3	+4.3§	4.9 Mar
Finland	+5.3 Q4	+3.8	+2.7§	+2.5§	–1.4 Apr	+2.6 Apr	+1.3	+1.9§	6.6 Apr
Iceland	+2.5 Q4	+7.8	+1.3§	+2.7§	na	+4.7 May	+7.6	+5.0§	1.1 Apr‡‡
Ireland	+5.0 Q4	+0.1	+5.0§	+3.4§	+10.7 Mar	+5.1 Apr	+3.7	+3.4§	4.3 Apr
Latvia	+10.7 Q1	na	+9.2§	+7.5§	+1.0 Mar	+8.9 Apr	+6.1	+6.0§	5.6 Mar
Lithuania	+8.3 Q1	+6.1	+7.0§	+6.4§	na	+4.8 Apr	+3.4	+1.8§	5.5 Mar
Luxembourg	+5.0 Q4	+7.0	+4.7§	+5.0§	+2.8 Feb	+2.1 Apr	+2.9	+2.2§	4.6 Mar‡‡
New Zealand	+2.9 Q4	+5.0	+3.1§	+3.1§	–0.4 Q4	+2.5 Q1	+3.3	+2.2§	3.8 Q1
Peru	+5.6 Mar	na	+6.7	+5.6	+7.7 Mar	–0.1 Apr	+2.9	+1.1	9.3 Apr‡‡
Philippines	+6.9 Q1	+10.3	+5.7	+5.8	–7.6 Mar	+2.3 Apr	+7.1	+3.9	7.6 Q1‡‡
Portugal	+2.1 Q1	+3.2	+1.6§	+2.1§	+1.8 Mar	+2.7 Apr	+3.7	+2.2	8.4 Q1‡‡
Slovakia	+8.9 Q1	na	+8.0§	+6.0§	+12.5 Mar	+2.7 Apr	+4.5	+2.5	10.8 Mar
Slovenia	+5.5 Q4	na	+4.0§	+3.8§	+9.3 Mar	+2.6 Apr	+2.7	+2.3	8.1 Mar‡‡

*% change on previous quarter, annual rate. †*The Economist* poll. ‡National definitions. §Economist Intelligence Unit estimate/forecast. **RPI inflation rate 4.5% in Apr. ††Latest three months. ‡‡Not seasonally adjusted. §§Year ending June.

Sources: National statistics offices and central banks; Thomson Datastream; Reuters; Centre for Monitoring Indian Economy; OECD; ECB

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The Economist commodity-price index

May 31st 2007
From The Economist print edition

The Economist commodity-price index

2000=100

	May 22nd	May 29th*	% change on one month	% change on one year
Dollar index				
All items	204.0	201.8	+0.7	+11.0
Food	161.2	162.8	+3.1	+18.1
Industrials				
All	259.3	252.3	–1.2	+5.6
Nfa†	164.0	164.4	+6.5	+0.9
Metals	311.3	300.3	–3.3	+7.1
Sterling index				
All items	156.6	154.5	+1.6	+5.6
Euro index				
All items	140.1	138.4	+1.6	+6.1
Gold				
$ per oz	661.50	657.90	–2.4	–0.5
West Texas Intermediate				
$ per barrel	64.90	63.26	–1.8	–12.0

*Provisional †Non-food agriculturals.

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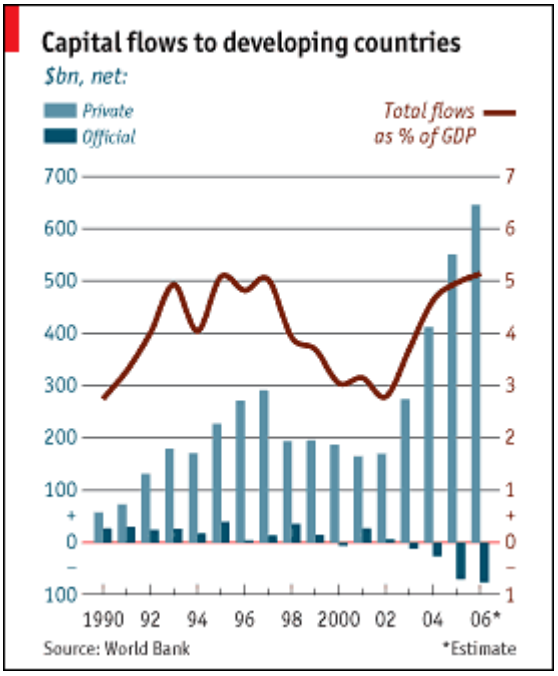
Capital flows to developing countries

May 31st 2007
From The Economist print edition



Private capital has been pouring into developing countries in recent years. Net inflows have risen from $169 billion in 2002 to $647 billion last year. Although equity investors have renewed their love affair with emerging markets, their contribution to the influx of private funds has been outweighed by direct corporate investments and debt finance. Whereas developing countries have been getting much more private capital, they have on balance been repaying official lenders. Net capital outflows to governments and organisations like the International Monetary Fund added up to $185 billion between 2003 and 2006. Over the same four years net inflows from private creditors came to $1.9 trillion.

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Trade, exchange rates, budget balances and interest rates

May 31st 2007
From The Economist print edition

Trade, exchange rates, budget balances and interest rates

	Trade balance* latest 12 months, $bn	Current-account balance latest 12 months, $bn	Current-account balance % of GDP 2007†	Currency units, per $ May 30th	Currency units, per $ year ago	Budget balance % of GDP 2007‡	Interest rates, % 3-month latest	Interest rates, % 10-year gov't bonds, latest
United States	−827.2 Mar	−856.7 Q4	−6.1	–	–	−1.7	5.24	4.89
Japan	+89.8 Mar	+181.5 Mar	+4.0	122	112	−4.4	0.57	1.73
China	+207.3 Apr	+249.9 2006	+8.1	7.65	8.02	−1.6	3.05	3.69
Britain	−157.6 Mar	−80.1 Q4	−3.0	0.51	0.53	−2.6	5.71	5.22
Canada	+46.3 Mar	+18.5 Q1	+1.1	1.07	1.10	1.3	4.29	4.50
Euro area	+3.2 Mar	+9.9 Mar	−0.1	0.74	0.78	−0.8	4.11	na
Austria	+0.3 Mar	+10.3 Q4	+1.9	0.74	0.78	−0.8	4.11	4.43
Belgium	+19.9 Mar	+7.8 Dec	+1.8	0.74	0.78	0.1	4.17	4.44
France	−34.2 Mar	−32.2 Mar	−1.3	0.74	0.78	−2.7	4.11	4.42
Germany	+220.4 Mar	+165.0 Mar	+4.9	0.74	0.78	0.2	4.11	4.38
Greece	−45.7 Mar	−31.7 Mar	−8.4‡	0.74	0.78	−2.2	4.11	4.56
Italy	−23.1 Mar	−45.6 Mar	−1.9	0.74	0.78	−2.6	4.11	4.58
Netherlands	+43.4 Mar	+16.8 Q1	+7.6	0.74	0.78	0.6	4.11	4.41
Spain	−116.6 Mar	−112.1 Feb	−8.8	0.74	0.78	1.7	4.11	4.43
Czech Republic	+2.6 Mar	−6.1 Q4	−3.8	21.1	22.0	−4.1	2.83	4.25
Denmark	+6.4 Mar	+5.5 Mar	+2.5	5.55	5.81	3.6	4.36	4.45
Hungary	−2.0 Mar	−6.5 Q4	−4.7	187	205	−6.4	7.80	6.53
Norway	+54.3 Apr	+56.1 Q4	+14.9‡	6.06	6.07	18.8	4.68	5.00
Poland	−6.2 Mar	−8.7 Mar	−2.6	2.85	3.07	−2.4	4.45	5.32
Russia	+131.3 Mar	+85.8 Q1	+5.7	25.9	27.0	6.0	10.50	6.06
Sweden	+19.7 Apr	+28.4 Q4	+6.6	6.92	7.22	2.2	3.32	4.22
Switzerland	+10.3 Apr	+106.1 Q4	+15.9	1.23	1.22	0.3	2.47	3.01
Turkey	−53.5 Mar	−32.1 Mar	−7.0	1.33	1.57	−2.7	19.07	18.42**
Australia	−10.8 Apr	−40.9 Q4	−5.3	1.22	1.33	1.3	6.36	6.01
Hong Kong	−19.0 Apr	+20.6 Q4	+9.8	7.80	7.76	2.0	4.71	4.45
India	−58.2 Mar	−10.0 Q4	−1.8	40.9	46.3	−3.4	7.62	8.39
Indonesia	+41.1 Mar	+9.6 Q4	+2.2	8,840	9,255	−1.4	8.58	6.28§
Malaysia	+28.6 Mar	+25.6 Q4	+13.5	3.40	3.63	−3.3	3.62	5.47§
Pakistan	−13.6 Apr	−6.5 Q4	−5.4‡	60.7	60.2	−4.6	9.76	6.95§
Singapore	+35.0 Apr	+38.1 Q1	+23.3	1.53	1.58	0.3	2.38	2.87
South Korea	+17.2 Apr	+5.2 Apr	+0.2	931	946	0.5	5.06	5.24
Taiwan	+13.0 Apr	+28.1 Q1	+6.7	33.0	32.0	−2.3	2.25	2.30
Thailand	+7.0 Apr	+8.8 Apr	+2.1	34.6	38.2	−1.5	3.75	3.70
Argentina	+11.4 Apr	+8.1 Q4	+2.5	3.08	3.08	1.0	9.44	na
Brazil	+46.7 Apr	+13.6 Mar	+0.8	1.96	2.30	−2.2	12.43	6.16§
Chile	+24.0 Apr	+5.3 Q4	+1.3	528	532	5.2	5.04	5.43§
Colombia	−0.9 Feb	−2.9 Q4	−2.7	1,930	2,480	−0.9	7.73	5.99§
Mexico	−10.2 Apr	−5.5 Q1	−1.4	10.8	11.3	−0.2	7.22	7.52
Venezuela	+28.2 Q1	+23.8 Q1	+9.8	2,147	2,562	−4.7	10.11	6.55§
Egypt	−12.6 Q4	+2.7 Q4	+1.5	5.70	5.76	−5.5	7.12	5.42§
Israel	−7.5 Apr	+6.8 Q4	+3.6	4.05	4.52	−1.0	3.65	4.40
Saudi Arabia	+148.5 2006	+95.4 2006	+18.2‡	3.75	3.75	13.2	5.04	na
South Africa	−9.5 Mar	−16.3 Q4	−6.0	7.19	6.70	0.5	9.40	7.89
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*							
Estonia	−3.8 Mar	−2.6 Mar	−12.7†	11.7	12.2	1.3	4.68	na
Finland	+12.3 Mar	+13.7 Mar	+5.7‡	0.74	0.78	3.4	4.08	4.42
Iceland	−1.8 Apr	−4.4 Q4	−18.7‡	61.9	71.7	1.8	13.74	na
Ireland	+33.6 Feb	−7.2 Q4	−4.1‡	0.74	0.78	0.5	4.11	4.41
Latvia	−5.6 Mar	−5.2 Mar	−20.0‡	0.52	0.54	nil	7.77	na
Lithuania	−5.7 Mar	−3.5 Mar	−10.3‡	2.57	2.69	−0.5	4.98	na
Luxembourg	−5.3 Feb	+4.4 Q4	na	0.74	0.78	0.3	4.11	na
New Zealand	−4.0 Apr	+6.2 Q4	−10.3‡	1.37	1.57	3.1	6.95	6.37
Peru	+9.0 Mar	+2.7 Q1	+1.8	3.18	3.30	0.1	4.50	na
Philippines	−3.9 Mar	+5.0 Dec	+3.6	46.3	52.9	−1.0	6.00	na
Portugal	−23.0 Feb	−17.8 Feb	−7.5‡	0.74	0.78	−3.3	4.11	4.50
Slovakia	−2.5 Mar	−3.9 Jan	−4.3‡	25.4	29.4	−3.0	4.14	4.41
Slovenia	−1.9 Mar	−1.4 Feb	−1.6‡	0.74	0.78	−1.2	na	na

*Merchandise trade only. †*The Economist* poll. ‡Economist Intelligence Unit forecast. §Dollar-denominated bonds. **Average of maturities up to 5 years.

Sources: National statistics offices and central banks; Thomson Datastream; Reuters; JPMorgan; Bank Leumi le-Israel; Centre for Monitoring Indian Economy; Danske Bank; Hong Kong Monetary Authority; Standard Bank Group; UBS; Westpac.

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Markets

May 31st 2007
From The Economist print edition

Markets

	Index May 30th	% change on one week	% change on Dec 29th 2006 in local currency	% change on Dec 29th 2006 in $ terms
United States (DJIA)	13,633.1	+0.8	+9.4	+9.4
United States (S&P 500)	1,530.2	+0.5	+7.9	+7.9
United States (NAScomp)	2,592.6	+0.6	+7.3	+7.3
Japan (Nikkei 225)	17,588.3	-0.7	+2.1	+0.1
Japan (Topix)	1,733.8	-0.4	+3.1	+1.1
China (SSEA)	4,250.0	-2.9	+51.0	+54.1
China (SSEB, $ terms)	302.9	-6.3	+128.1	+132.8
Britain (FTSE 100)	6,602.1	-0.2	+6.1	+7.1
Canada (S&P TSX)	14,081.7	-0.4	+9.1	+18.1
Euro area (FTSE Euro 100)	1,403.5	-0.8	+9.8	+11.8
Euro area (DJ STOXX 50)	4,468.7	-0.7	+8.5	+10.5
Austria (ATX)	4,823.8	-1.2	+8.1	+10.1
Belgium (Bel 20)	4,652.7	-2.2	+6.0	+8.0
France (CAC 40)	6,042.2	-1.3	+9.0	+11.0
Germany (DAX)*	7,765.0	+0.4	+17.7	+19.9
Greece (Athex Comp)	4,914.9	-0.2	+11.9	+13.9
Italy (S&P/MIB)	42,964.0	-1.4	+3.7	+5.6
Netherlands (AEX)	535.0	-1.2	+8.0	+10.0
Spain (Madrid SE)	1,670.7	-0.4	+7.4	+9.4
Czech Republic (PX)	1,820.2	-1.0	+14.6	+13.4
Denmark (OMXCB)	478.0	-1.2	+12.7	+14.9
Hungary (BUX)	25,981.9	-0.1	+4.6	+6.7
Norway (OSEAX)	554.5	-2.0	+10.4	+13.3
Poland (WIG)	62,314.0	+1.3	+23.6	+25.9
Russia (RTS, $ terms)	1,724.7	-5.0	-11.7	-10.3
Sweden (Aff.Gen)	405.3	-0.9	+10.9	+9.6
Switzerland (SMI)	9,382.8	-0.6	+6.8	+6.4
Turkey (ISE)	46,274.7	-0.3	+18.3	+25.6
Australia (All Ord.)	6,271.7	-1.5	+11.1	+15.9
Hong Kong (Hang Seng)	20,293.8	-2.4	+1.6	+1.3
India (BSE)	14,411.4	+0.3	+4.5	+13.2
Indonesia (JSX)	2,055.4	-2.3	+13.8	+15.8
Malaysia (KLSE)	1,339.2	-1.2	+22.2	+26.7
Pakistan (KSE)	12,806.9	+2.5	+27.6	+27.9
Singapore (STI)	3,511.1	-1.3	+17.6	+17.8
South Korea (KOSPI)	1,662.7	+1.0	+15.9	+15.8
Taiwan (TWI)	8,147.3	-0.9	+4.1	+2.9
Thailand (SET)	737.4	+0.8	+8.5	+13.2
Argentina (MERV)	2,222.2	+1.2	+6.3	+5.7
Brazil (BVSP)	52,527.0	+1.4	+18.1	+28.9
Chile (IGPA)	14,216.5	+2.2	+14.9	+15.9
Colombia (IGBC)	10,011.0	-5.5	-10.3	+4.1
Mexico (IPC)	31,380.0	+1.7	+18.6	+18.7
Venezuela (IBC)	39,369.1	-2.6	-24.6	+17.4
Egypt (Hermes)	69,043.8	+2.5	+12.6	+13.0
Israel (TA-100)	1,108.0	+1.9	+20.2	+25.1
Saudi Arabia (Tadawul)	7,492.7	-2.8	-5.6	-5.6
South Africa (JSE AS)	28,439.4	-2.2	+14.1	+11.9
Europe (FTSEurofirst 300)	1,599.2	-0.7	+7.8	+9.8
World, dev'd (MSCI)	1,608.6	-0.2	+8.4	+8.4
Emerging markets (MSCI)	999.3	-1.6	+9.5	+9.5
World, all (MSCI)	399.1	-0.4	+8.5	+8.5
World bonds (Citigroup)	659.7	-0.4	+0.2	+0.2
EMBI+ (JPMorgan)	418.5	-0.5	+2.8	+2.8
Hedge funds (HFRX)	1,350.7	-0.1	+5.9	+5.9
Volatility, US (VIX)	12.8	13.2	11.6	(levels)
CDSs, Eur (iTRAXX)†	16.9	-1.1	-21.1	-19.6
CDSs, N Am (CDX)†	30.6	+1.0	+4.1	+4.1
Carbon trading (EU ETS) €	0.24	-4.0	-96.2	-96.1

*Total return index. †Credit-default swap spreads, basis points.

Sources: National statistics offices, central banks and stock exchanges; Thomson Datastream; Reuters; WM/Reuters; JPMorgan Chase; Bank Leumi le-Israel; CBOE; CME; Danske Bank; EFX; HKMA; Markit; Standard Bank

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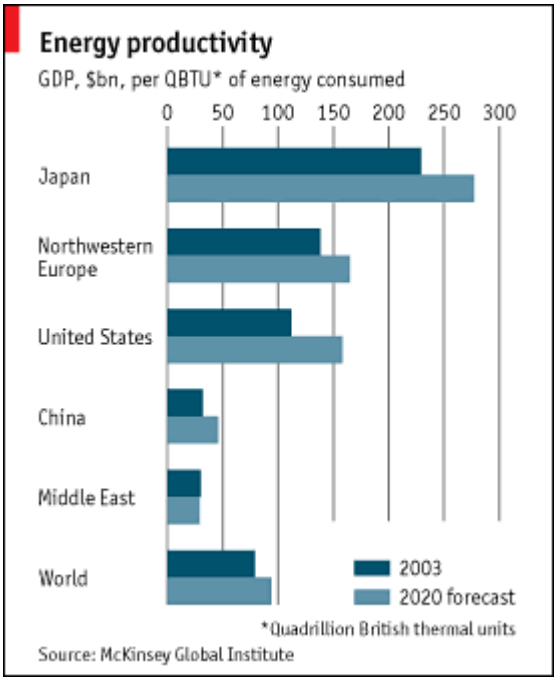
Energy productivity

May 31st 2007
From The Economist print edition



As policymakers fret about the threat of global warming and the insecurity of fuel supplies, one response is to use energy more efficiently. If energy productivity—the ratio of GDP to energy used—continues to rise at its historic rate of 1% a year (see chart), global energy demand will grow at an annual rate of 2.2% until 2020 according to McKinsey, a management consultancy. But that growth in demand could be less than half as big with a concerted effort to make bigger gains in energy efficiency. The potential is evident from today's large gap between developed countries like Japan and America. The gains could be made using existing technologies and through investments that would pay for themselves.

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